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NAVAL UNDERWATER SYSTEMS CENTER
NEW LONDON LABORATORY
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PARKA I: SOFTWARE PROCEDURES REPORT

by

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NUSC/NL Technical Memorandum No. 2211-933-70

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INTRODUCTION

This memorandum describes the software procedures employed by the SANDS digital laboratory during phases I and II of PARKA I for the real time acquisition and processing of underwater acoustic data as received from FLIP. Brief descriptions of the tests, their objectives and equations are included. Program listings of these procedures are contained in Appendixes B and C.

ADMINISTRATIVE INFORMATION

This memorandum was prepared under NUSC Project Title: Long-Range Acoustic Transmission Experiments for Surveillance Systems Development; R. Hasse and R. Martin, NUSC/NL Principal Investigators. The sponsoring activity was ONR, Code 102-08; Dr. J. B. Hersey, Program Manager.

DESCRIPTION OF EXPERIMENTS

The purposes of the experiments were to sample the underwater environment, as disturbed by acoustic sources propagating from a ship as it opened (closed) range. Propagation loss verses range measurements were made for various source depths, receiver depths and frequencies. As illustrated in Figure 1, two types of experiments were conducted: Phase I in which 3 lb explosive charges were used as sources, and

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Phase II in which 3 and 4 lb charges followed by a continuous tone from a CW transducer were used as sources for the experiment.

Phase I

The source ship as it opened (closed) range, detonated a sequence of twenty-two 3 pound charges each hour. This hourly sequence of events is illustrated in Figure 1b. The last five-minute interval was used for an ambient noise sample and the presentation of processed data. The processing of shot data included for the various frequencies, hydrophone depths, source depths, etc.:

1. Determination of propagation loss from total energy observations.
2. Determination of propagation loss from peak level measurements.
3. The difference between the two types of propagation loss calculations.
4. Determination of hourly median values of the propagation loss.
5. Determination of range from each shot instant and time of received signal.
6. Measurement of ambient noise levels.
7. Measurement of signal-to-noise ratios of acoustic signals.
8. Correction of received levels based on signal-to-noise ratios.

Phase II

During each hour of this phase, the source ship detonated a sequence of five explosive charges followed by 45 minutes of a CW tone. This sequence of events is illustrated in Figure 1c. The last five minutes of each hour was used for obtaining an ambient noise sample and the presentation of processed data. The shot data were processed as was the data in Phase I. For the CW data, three additional measurements were taken:

1. 30 second running averages of the energy every two seconds.
2. 5 minute averages of the energy.
3. Propagation loss based on 5 minute averages.

The equations used to calculate the parameters discussed above are given in Appendix A.

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FLIP TO SANDS DATA LINK

With FLIP tethered to SANDS and SANDS utilizing her bow thruster to help maintain station, the acoustic analog signals received by the hydrophones that were suspended from FLIP were relayed to SANDS. This was accomplished in two ways. One method was to transmit the data by way of an rf telemetry link, while the other method involved SANDS passing a hard wire to FLIP and then receiving the data via the wire link. Both methods were used successfully during the PARKA cruise.

CALIBRATION

Prior to commencement of each exercise the entire data acquisition system was calibrated. A known signal at each frequency of interest was fed through the system and into the computer. The computer, utilizing the attenuator settings and the calibration equivalent pressure levels, determined two sets of calibration constants, CAL and CALPK. These values were used to correct for the systems attenuation of the incoming signals on each channel. Upon termination of each exercise the system was recalibrated to determine if any changes in the systems characteristics had taken place.

The equations for CAL and CALPK are given in Appendix A.

SPECIAL FEATURES OF THE SOFTWARE

The flow of data received from FLIP was fed thru a system of filters, rectifiers, integrators, thru a multiplexer and an A/D converter to the central processing unit. The input signals were recorded on mag tape, processed and then released in the form of graphs, lists and punched paper tape. The processed data were also permanently stored on magnetic tapes. The raw data tapes were kept for additional processing at a later date, if desired, and the processed data tapes were kept for preparing the data for different forms of presentation such as CALCOMP plots and other types of outputs.

The two software packages, written for the two phases were controlled by executive routines, (execs) which were designed as infinite loops such that one entire hour's events would be processed by one pass through the loop. These execs controlled the flow of events including input and output (I/O) and timing. The pulses from a time code generator were inputted to the UNIVAC 1230 so that exact times could be recorded and the basic timing of the sequences would also be exact. The actual timing of the programs by the exec was determined by the computer's internal clock, which the exec would

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synchronize, if necessary, from the time code generator once every hour. In case the time code generator failed, an external key on the computer console could be set to eliminate the synchronization of the two clocks. Releasing this key would cause the exec to once again synchronize the internal clock from the time code generator once each hour.

To allow for the expected variation in the time of shot instant, the exec set up a "sampling window" which caused the sampling program to start searching for a signal 30 seconds early and continue looking for 30 seconds after the signal was expected. At that time it would be declared a dud, unless it was detected earlier by crossing six out of ten times, a threshold determined from the noise level. This sampling routine controlled the sampling rate, took the samples into core, demultiplexed and filled appropriate tables. Two sampling options were available:

1. Sample for 15 seconds at 250 samples/second after the signal had been detected. Also, since a history was kept, the 15 seconds worth of signal could be retrieved if the computer failed to detect the signal (false rest), by manually interrupting the computer from the teletype.

2. Sample for $7\frac{1}{2}$ seconds at 500 samples/second after the signal had been detected. Also, since a history was kept, the $7\frac{1}{2}$ seconds worth of signal could be retrieved after a false rest had been observed, by manually interrupting the computer from the teletype.

So that the progress and status of the computer could be monitored, a 2 channel hot wire recorder was used. One channel recorded the output from one of the filters, which indicated to an observer when the shots were being received, while the other channel recorded codes from the system's computer, showing just what the computer was doing at that time. An example of this is shown in Figure 2. To alert an observer to monitor the recorder, a bell was sounded every time sampling started.

Besides the execs and the processing programs, there were several interrupt routines, that is, programs which were initiated manually while the computer was running but which didn't disturb the calculations of the other routines.

1. Several seconds before a charge detonated, the source ship sent a tone over a radio channel. When the shot detonated, the tone was cut off. To record shot instant, an observer, listening to the tone, pushed a button when the tone was cut off which caused an

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interrupt of the main program and recorded the time of shot instant and stored it in the proper place in memory.

2. In the case of an error in recording shot instants, typing a "C" on the teletype with the interrupt set would remove the latest time of shot instant.

3. When attenuators or other parameters were changed, typing an "A" on the teletype with the interrupt set would allow entering the parameters from the teletype into any location in core memory.

4. Setting another external key on the computer console, would hold the computer's progress after a noise sample was taken. To take another sample, typing an "R" with the interrupt set would cause the exec to cycle through the noise program again. The exec could be continued by releasing the key.

5. In case a false alarm was observed on the hot wire recorder, typing an "R" on the teletype with the interrupt set would cause the program to reset and start looking for another signal.

6. If a false rest was observed, typing an "F" with the interrupt set would cause the program to sample for n more seconds (where n was variable) and utilize that data, plus enough "past" data to make up the 15 ($7\frac{1}{2}$) seconds worth of data for processing.

7. If the exec for some reason lost synchronism with the 2 minute, 3 minute shot sequence, the "window" could be shifted in either direction by typing a "U" or a "D" with the interrupt set, each time shifting the window forward or backward in time by 10 seconds.

RESULTS

The processed data tapes were edited and other tapes created to eliminate erroneous values obtained from problems occurring during the tests such as loss of the bang box, etc. The data were further edited from the Sanborn charts which pinpointed additional problems that had arisen during the tests. From these edited tapes, the information for each set of graphs was separated onto more magnetic tapes, then plotted on a CALCOMP plotter. A total of about 150 graphs of N_w vs. R , S/N vs. R , Noise vs. R , were obtained for the two phases.

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ACKNOWLEDGEMENT

Appreciation is expressed for the contributions made to the project by Codes 2072 and 2073. Their machine operators worked after hours on occasion and even came in one weekend to assist on the project. P. Breslin programmed the HONEYWELL system to achieve compatability with the SANDS digital system, greatly simplifying the programming task and R. Drinkard has spent a great many hours and shown a great deal of patience, programming the 1108 for the CALCOMP plotter.

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APPENDIX A

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EQUATIONS

The equation used to calculate the parameters described are:

$$\text{RANGE: Range} = (1.63 \text{ Kyds/sec}) \times (\text{travel time in seconds})$$

Travel time was obtained as a result of an observer, listening via a radio channel, to a tone and pushing a button when the tone was cut off at shot instant. The computer then recorded the time of shot instant and subtracted that time from the time of received signal which was recorded when the input level of the arriving signal exceeded a predetermined level.

Let

X_{Si} = the i^{th} signal plus noise sample.

X_{Ni} = the i^{th} noise only sample.

SR = the sampling rate.

Δt = $1/\text{SR}$

NAT = The setting of the attenuators during the noise sample.

ATT = The setting of the attenuators during the signal sample.

L_s = The source level of a particular charge in the appropriate frequency band.

PEAK = The maximum value in a sampling interval.

The calibration values were calculated for given input signals for each frequency band:

$$\text{CAL} = 10 \log_{10} \left(\sum X_i^2 \Delta t \right) + \text{ATT} - \text{CEPL}$$

$$\text{CALPK} = 20 \log_{10} (\text{PEAK}) + \text{ATT} - \text{CEPL}$$

where CEPL was the appropriate cal equivalent pressure level in db.

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SIGNAL LEVEL, corrected for S/N:

$$\text{SIG} = 10 \log_{10} (\sum X_{si}^2 \Delta t) + \text{ATT} - \text{CAL}$$

NOISE LEVEL

$$\text{NOS} = 10 \log_{10} (\sum X_{ni}^2 \Delta t) + \text{NAT} - \text{CAL}$$

SIGNAL-TO-NOISE RATIO

$$\text{S/N} = \text{SIG} - \text{NOS} \text{ (corrected if low signal level).}$$

PROPAGATION LOSS:

$$N_W = L_s - \text{SIG}$$

where L_s and SIG were calculated from the same charge in the same frequency band.

PROPAGATION LOSS OF THE PEAK VALUES:

$$PL_{\text{peak}} = L_s - L_r$$

where $L_r = 20 \log \text{PEAK} + \text{ATT} - \text{CALPK}$

The median values were obtained by entering all the values in ascending order in a table, then retrieving the center value.

The program, for the CW period, sampled continuously at 20 samples/second, calculated 30 second averages of the squared and integrated values every .2 seconds plus calculating 5 minute averages of the squared and integrated values every 5 minutes during the CW period. Propagation loss was calculated as above using the 5 minute average results.

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APPENDIX B

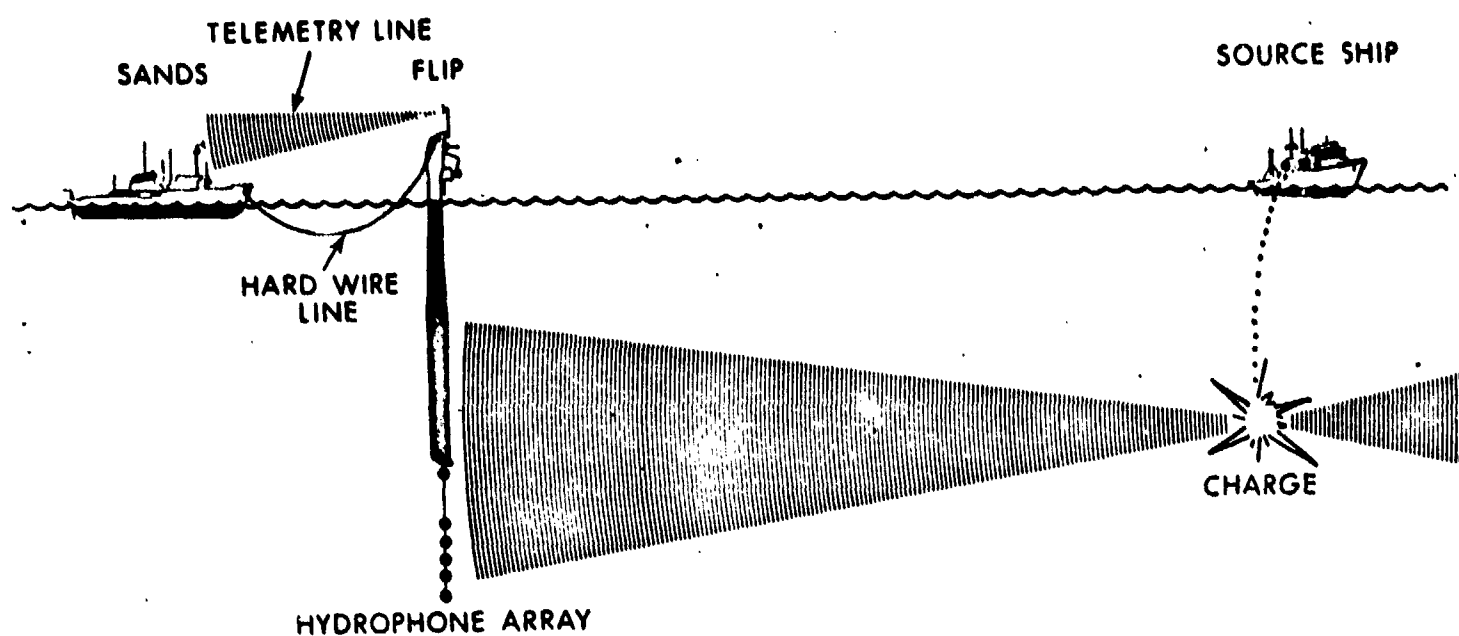


Fig. 1a SHIPS' RELATIVE POSITIONS

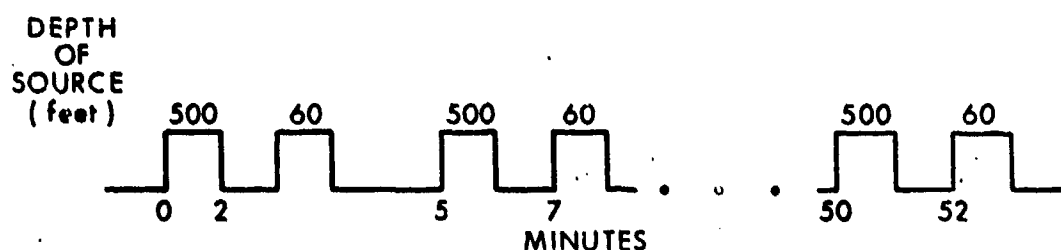


Fig. 1b PHASE 1 SEQUENCE OF EVENTS

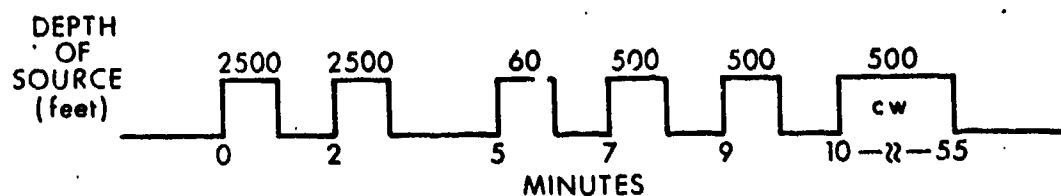
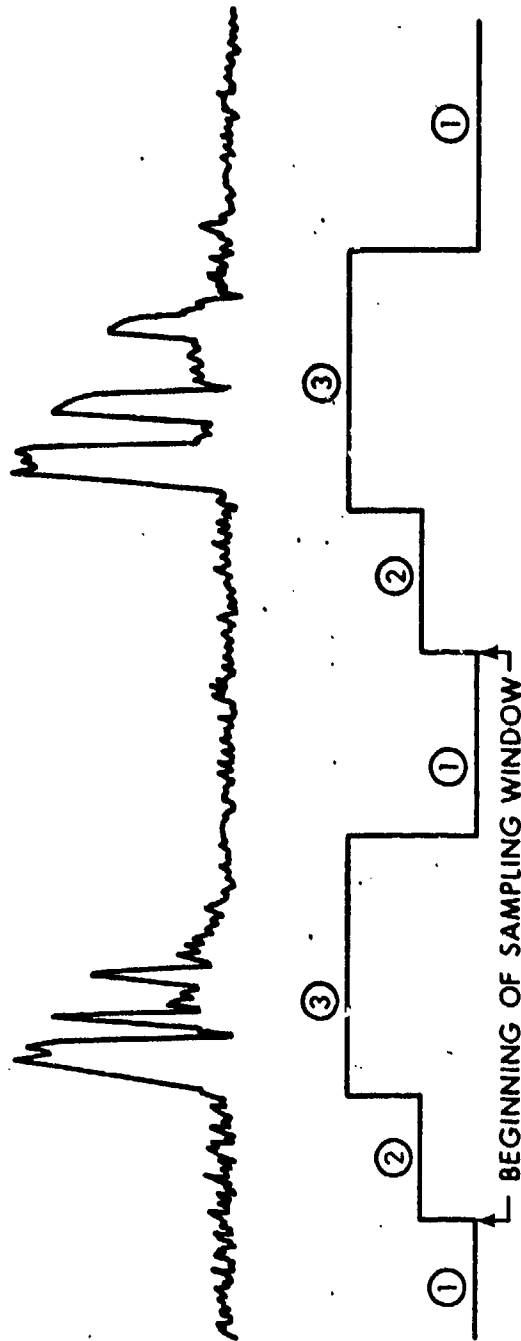


Fig. 1c PHASE 2 SEQUENCE OF EVENTS

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- LEVEL ① COMPUTER IS NOT INVOLVED WITH SAMPLING THE SIGNALS
- LEVEL ② COMPUTER IS IN THE SEARCH MODE
- LEVEL ③ COMPUTER HAS DETECTED A SIGNAL & IS IN THE SAMPLING MODE
- TYPICAL TRACE SHOWING THE SIGNAL ARRIVALS DIRECTLY FROM ONE OF THE FILTERED INPUT CHANNELS (UPPER HALF) & THE COMPUTER MODE AS IT SEARCHES FOR & DETECTS THE SIGNAL (BOTTOM HALF)

Figure 2

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CS-1 Program Listings

PHASE11AA PROGRAM PARKA
SYS-PR0C PARKA*12AUG68
LOC-00
VRBL TYPECELL1*FXW*3
VRBL TYPECELL2*FXW*3
VRBL FORMCELL*FXW*3
TABLECONST*H*1*10
FIELDATAN0*FXWS*0*1*270
END-TABLE CONST
TABLEBANG*V*5*180
FIELDICLOCKCYS*FXWS*0*1
FIELDBSEC*FXWS*1*1
FIELDBMIN*FXWS*2*1
FIELDBHOUR*FXWS*3*1
FIELDBDAY*FXWS*4*1
END-TABLE BANG
VRBL BANGTIME*FXW
VRBL WHY*FXW
VRBL EXS*FXW
VRBL DENOM*FXW
VRBL ELGNA*FXW*270
VRBL RANGEIND*FXW
VRBL NUMDEN*FXW*270
VRBL SQNUMDEN*FXW*270
VRBL TEMPHOLD*FXW
VRBL CHANGE*FXW
VRBL TESTIME*FXW*120
VRBL LASHOTIME*FXW*120
VRBL SERISCNTR*FXW
VRBL MONTH*FXW
VRBL DAY*FXW
VRBL HOUR*FXW
VRBL MIN*FXW
VRBL SEC*FXW
VRBL TRST*FXW
VRBL LASTIME*FXW
VRBL ICCYS*FXW

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VRBL ISEC*FXW
VRBL IMINUTE*FXW
VRBL IHOUR*FXW
VRBL IDAY*FXW
VRBL IMONTH*FXW
VRBL CTSNDS*FXW
VRBL RWT4*FXW
VRBL TESTY *FXW
VRBL ICMSEC *FXW
VRBL TH1 *FXW
VRBL MTN *FXW
VRBL SHTCTR *FXW
VRBL LTAPE *FXW
VRBL SA *FXW
VRBL SQ *FXW
VRBL PAR *FXW
VRBL LTU2 *FXW
VRBL FORCE *FXW
VRBL INI *FXW
VRBL CPHP *FXW
VRBL SOA *FXW
VRBL THAT *FXW
VRBL MSEC *FXW
VRBL DEPTH *FXW
VRBL CODEWORD *FXW
VRBL REPRATE *FXW
VRBL HMK *FXW
VRBL RESET *FXW
VRBL TMP*FXW
VRBL WORDS*FXW
VRBL ITEMS*FXW
VRBL TEMP*FXW
VRBL HYDRU*FXW
VRBL STRE*FXW
VRBL TEMP3*FXW
VRBL RLM*FXW
VRBL RLMTTY*FXW
VRBL HOURCNTR*FXW
VRBL GSLO*FXW
VRBL SSBC*FXW
VRBL MFLAG*FXW
VRBL ETL*FXW
VRBL SSSS*FXW
VRBL GSN*FXW
VRBL GTIMER*FXW
VRBL FTEMP*FXW
VRBL BHOLD*FXW
VRBL CALIN2*FXW
VRBL MIN5FLAG*FXW
VRBL ALPHA*FXW
VRBL SOVEL*FXW
VRBL THCTR1*FXW
VRBL ZETA*FXW
VRBL WAITIME*FXW
VRBL TFLAG*FXW
VRBL BEHOLD*FXW
VRBL RANGE*FXW
END-LOC-DD

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10641	00000	00000		PROCEDURE PSTATUS
10642	15030	62170		STR A*W(SA)
10643	14030	62171		STR Q*W(SQ)
10644	16050	62257		STR B0*CPL(TFLAG)
10645	67340	00000		TERM MAGGY*OUTPUT
10646	66340	00000		TERM MAGGY*INPUT
10647	17370	62256		STR MAGGY*W(STATWRD)
10650	10000	00002		ENT Q*2
10651	11000	00002		ENT A*2
10652	43530	62256		COM MASK*W(STATWRD)*ANOT
10653	61000	10671		JP STLT
10654	07000	00005	STLPE	LSH AQ*5
10655	43530	62256		COM MASK*W(STATWRD)*ANOT
10656	61000	10673		JP STPE
10657	07000	00001	STLAT	LSH AQ*1
10660	43530	62256		COM MASK*W(STATWRD)*ANOT
10661	61000	10675		JP STPE1
10662	07000	00007	STIC	LSH AQ*7
10663	43530	62256		COM MASK*W(STATWRD)*ANOT
10664	61000	10677		JP STTB
10665	11030	62170		ENT A*W(SA)
10666	10030	62171		ENT Q*W(SQ)
10667	60000	00000		RIL
10670	61010	10641		RETURN
10671	14030	62166	STLT	STR Q*W(LTAPE)
10672	61000	10654		JP STLPE
10673	14030	62167	STPE	STR Q*W(PAR)
10674	61000	10657		JP STLAT
10675	14030	62167	STPE1	STR Q*W(PAR)
10676	61000	10662		JP STIC
10677	63300	10703	STTB	JP STTB1*TELO
10700	74330	15020		OUT TELY*W(MTIC)
10701	13330	14746		EX-COM TELY*W(FLIP2)*FORCE
10702	13330	14747		EX-COM TELY*W(FLIP3)*FORCE
10703	11030	62170	STTB1	ENT A*W(SA)
10704	10030	62171		ENT Q*W(SQ)
10705	60000	00000		RIL
10706	61000	10670		RETURN
10707	00000	00000		END-PROC STATUS
10710	11530	62166		PROCEDURE TAPESTAT
10711	61010	10707		ENT A*W(LTAPE)*ANOT
10712	16030	62166		RETURN
10713	16030	62257		STR B0*W(LTAPE)
10714	13370	14771		STR B0*W(TFLAG)
10715	11530	62257	JA	EX-COM MAGGY*W(RS1)*FORCE
10716	61000	10715		ENT A*W(TFLAG)*ANOT
10717	16030	62257		JP JA
10720	11530	62166		STR B0*W(TFLAG)
10721	61000	10723		ENT A*W(LTAPE)*ANOT
10722	61000	10762		JP TIS2
10723	13370	14772	TIS2	JP RESETT
10724	11530	62257	JB	EX-COM MAGGY*W(RS2)*FORCE
10725	61000	10724		ENT A*W(TFLAG)*ANOT
10726	16030	62257		JP JB
10727	11530	62166		STR B0*W(TFLAG)
10730	61000	10732		ENT A*W(LTAPE)*ANCT
10731	61000	10752		JP TIS3
				JP TRW2

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10732	13370	14773	TIS3	EX-COM	MAGGY*W(RS3)*FORCE	
10733	11530	62257	JC	ENT	A*W(TFLAG)*ANOT	
10734	61000	10733		JP	JC	
10735	16030	62257		STR	B0*W(TFLAG)	
10736	11530	62166		ENT	A*W(LTAPE)*ANOT	
10737	61000	10741		JP	TIS4	
10740	61000	10773		JP	RESESS	
10741	13370	14774	TIS4	EX-COM	MAGGY*W(RS4)*FORCE	
10742	11530	62257	JD	ENT	A*W(TFLAG)*ANOT	
10743	61000	10742		JP	JD	
10744	16030	62257		STR	B0*W(TFLAG)	
10745	11530	62166		ENT	A*W(LTAPE)*ANOT	
10746	61000	10711		RETURN		
10747	36030	62224		RPL	Y+1*W(RWT4)	
10750	16030	62166		STR	B0*W(LTAPE)	
10751	61000	10711		RETURN		
10752	12100	00001	TRW2	ENT	B1*1	
10753	65000	11003		RJP	ENDFILEIT	END OF FILE ON UNIT
10754	13370	14775		EX-COM	MAGGY*W(RWCW2)*FORCE	
10755	11530	62257	JE	ENT	A*W(TFLAG)*ANOT	
10756	61000	10755		JP	JE	
10757	16030	62257		STR	B0*W(TFLAG)	
10760	16030	62166		STR	B0*W(LTAPE)	
10761	61000	10732		JP	TIS3	
10762	36010	62163	RESETT	RPL	Y+1*L(MTN)	
10763	12100	00000		ENT	B1*0	
10764	65000	11003		RJP	ENDFILEIT	END OF FILE ON UNIT 1
10765	13370	14767		EX-COM	MAGGY*W(RW1)*FORCE	
10766	11530	62257	JG	ENT	A*W(TFLAG)*ANOT	
10767	61000	10766		JP	JG	
10770	16030	62257		STR	B0*W(TFLAG)	
10771	16030	62166		STR	B0*W(LTAPE)	
10772	61000	10723		JP	TIS2	
10773	16010	62163	RESESS	STR	B0*L(MTN)	
10774	12100	00002		ENT	B1*2	
10775	65000	11003		RJP	ENDFILEIT	END OF FILE ON UNIT
10776	13370	14770		EX-COM	MAGGY*W(RW3)*FORCE	
10777	11530	62257	JF	ENT	A*W(TFLAG)*ANOT	
11000	61000	10777		JP	JF	
11001	16030	62166		STR	B0*W(LTAPE)	
11002	61000	10741		JP	TIS4	
11003	12000	00000	ENDFILEIT	NO-OP		WRITES END OF FILE & END OF TAPE
11004	13371	15000		EX-COM	MAGGY*W(WEOF+B1)*FORCE	
11005	11530	62257	EDFA	ENT	A*W(TFLAG)*ANOT	
11006	61000	11005		JP	EDFA	WAIT FOR TAPE INTERRUPT
11007	13030	62257		STR	B0*W(TFLAG)	
11010	61010	11003		JP	L(ENDFILEIT)	
11011	00000	00000		END-PROC	TAPESTAT	
11012	16110	11051		PROCEDURE	MONROE	
11013	16210	11052		STR	B1*L(STRB1)	
11014	16310	11053		STR	B2*L(STRB2)	
11015	16610	11054		STR	B3*L(STRB3)	
11016	16710	11055		STR	B6*L(STRB6A)	
11017	15010	11025		STR	B7*L(STRB7)	
11020	12600	00117		STR	A*L(MAB)	BUFFER ADDRESS IN A
11021	16036	11057		ENT	B6*79D	
11022	72600	11021	DOS	CL	W(HA+B6)	
				BJP	B6*DDS-1	

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11023	12300	00000		ENT	B3*0	
11024	12200	00000		ENT	B2*0	
11025	11000	00000	MAB	ENT	A*0	
11026	20002	00000		ADD	A*B2	BUFFER ADDRESS *B2 I A
11027	12770	00000		ENT	B7*A	
11030	10037	00000		ENT	Q*W(B7)	PICK UP BUFFER WORD
11031	12100	00000		ENT	B1*0	
11032	11000	00000	MAA	CL	A	
11033	07000	00006		LSH	AQ*6	
11034	15010	11036		STR	A*L(SPACETEST)	
11035	21400	00001		SUB	A*1*AZERO	
11036	11000	00000	SPACETEST	ENT	A*0	
11037	15033	11057		STR	A*W(HA+B3)	
11040	12303	00001		ENT	B3*B3+1	
11041	71100	00004		BSK	B1*4	
11042	61000	11032		JP	MAA	
11043	71200	00017		BSK	B2*150	
11044	61000	11025		JP	MAB	
11045	74170	11177		OUT	MONRO*W(HBUF)	
11046	12100	05670		ENT	B1*30000	
11047	72100	11047	MAC	BJP	B1*MAC	
11050	67140	00000		TERM	MONRO*OUTPUT	
11051	12100	00000	STRB1	ENT	B1*0	
11052	12200	00000	STRB2	ENT	B2*0	
11053	12300	00000	STRB3	ENT	B3*0	
11054	12600	00000	STRB6A	ENT	B6*0	
11055	12700	00000	STRB7	ENT	B7*0	
11056	61010	11011		RETURN		
			HA	RESERVE	800	
11177	11176	11057	HBUF	U-TAGHA+79D*HA		
				END-PROC	MONROE	
11200	00000	00000		PROCEDURE	LFANDCR	
11201	10000	00075		PUT	75*W(PTCDE)	
11202	14030	11210				
11203	74170	11211		OUT	MONRO*W(PTBUF)	
11204	12100	05670		ENT	B1*30000	
11205	72100	11205	LALA	BJP	B1*LALA	
11206	67140	00000		TERM	MONRO*OUTPUT	
11207	61010	11200		RETURN		
11210	00000	00000	PTCDE	0		
11211	11210	11210	PTBUF	U-TAGPTCDE*PTCDE		
				END-PROC	LFANDCR	
11212	00000	00000		PROCEDURE	UPITIME	
				COMMENT	UPDATES	INTERNAL TIME FROM INTERNAL CLOCK
11213	11030	62213		ENT	A*W(LASTIME)	
11214	10030	00160		ENT	Q*W(160)	
11215	14030	62213		STR	Q*W(LASTIME)	
11216	27070	00000		SUB	Q*A	
11217	34030	62214		RPL	Y+Q*W(ICCYS)	ADD LAPSED CYCLES TO COUNT
11220	11030	62214	UPA	ENT	A*W(ICCYS)	
11221	21600	02000		SUB	A*1024D*AP0S	HAS ONE SECOND ELAPSED
11222	61000	11246		JP	UPB	NO
11223	65000	11247		RJP	SETCYCNT	SET CYCLE COUNT TO CURRENT TIME
11224	15030	62214		STR	A*W(ICCYS)	
11225	36030	62215		RPL	Y+1*W(ISEC)	UPDATE SECONDS
11226	21600	00074		SUB	A*60D*AP0S	HAS ONE MINUTE ELAPSED
11227	61000	11220		JP	UPA	NO
11230	15030	62215		STR	A*W(ISEC)	

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11231	36030	62215	RPL	Y+1*W(IMINUTE)	UPDATE MINUTES
11232	21600	00074	SUB	A*600*AP05	HAS ONE HOUR ELAPSED
11233	61000	11220	JP	UPA	NO
11234	15030	62216	STR	A*W(IMINUTE)	
11235	36030	62217	RPL	Y+1*W(1 HOUR)	UPDATE HOURS
11236	21600	00030	SUB	A*240*AP05	HAS ONE DAY ELAPSED
11237	61000	11220	JP	UPA	NO
11240	15030	62217	STR	A*W(1 HOUR)	
11241	36030	62220	RPL	Y+1*W(1 DAY)	UPDATE DAYS
11242	21600	00037	SUB	A*310*AP05	HAS AUGUST TURNED TO SEPTEMBER
11243	61000	11220	JP	UPA	NO
11244	36030	62221	RPL	Y+1*W(1 MONTH)	
11245	61000	11220	JP	UPA	
11246	61010	11212	UPB	RETURN	
11247	12000	00000	SETCYCNT	NO-OP	
11250	15030	11262	STR	A*W(KEEPA)	
11251	36030	62173	RPL	Y+1*W(CTSND5)	
11252	21730	11261	SUB	A*W(CYCLENGTH)*ANEG	TEST FOR END OF SHOT CYCLE
11253	61000	11256	JP	SCA	CYCLE HAS ENDED
11254	11030	11262	SCB	ENT	A*W(KEEPA)
11255	61010	11247	JP	L(SETCYCNT)	
11256	16050	62175	SCA	STR	B0*CPL(CPHP)
11257	16030	62173	STR	B0*W(CTSND5)	SET NEW CYCLE FLAG
11260	61000	11254	JP	SCB	
11261	00000	00036	CYCLENGTH	300	
11262	00000	00000	KEEPA	0	
11263	00000	00000	END-PROC	UPITIME	
			PROCEDURE	TIMESYNC	
			COMMENT	SYNCS INTERNAL TIME TO EXTERNAL CLOCK	
11264	73070	11410	IN	EXCLOK*W(TRSTBC)	
11265	62040	11265	TSA	JP	TSA*EXPI
11266	10000	00177	ENT	Q*177	SECONDS MASK
11267	40030	62165	ENT	LP*W(TRST)	
11270	15030	11411	STR	A*W(COMCELL)	
11271	73070	11410	TSC	IN	EXCLOK*W(TRSTBC)
11272	62040	11272	TSB	JP	TSB*EXPI
11273	40030	62165	ENT	LP*W(TRST)	
11274	21530	11411	SUB	A*W(COMCELL)*ANOT	TEST FOR SECONDS CHANGE
11275	61000	11271	JP	TSC	LOOP UNTIL SECONDS C ANGE
11276	10000	00017	ENT	Q*17	
11277	40030	62165	ENT	LP*W(TRST)	
11300	15030	62206	STR	A*W(SEC)	
11301	10000	00160	ENT	Q*160	
11302	40030	62165	ENT	LP*W(TRST)	
11303	03000	00042	RSH	AQ*340	
11304	22000	00012	MUL	10D	
11305	34030	62206	RPL	Y+Q*W(SEC)	
11306	10000	03600	ENT	Q*3600	
11307	40030	62165	ENT	LP*W(TRST)	
11310	02000	00007	RSH	A*7	
11311	15030	62205	STR	A*W(MIN)	
11312	10000	34000	ENT	Q*34000	
11313	40030	62165	ENT	LP*W(TRST)	
11314	03000	00051	RSH	AQ*410	
11315	22000	00012	MUL	10D	
11316	34030	62205	RPL	Y+Q*W(MIN)	
11317	10030	63401	ENT	Q*740000	
11320	40030	62165	ENT	LP*W(TRST)	

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11321	02000	00016	RSH	A*14D	
11322	15030	62204	STR	A*W(HOUR)	
11323	10030	63402	ENT	Q*3000000	
11324	40030	62165	ENT	LP*W(TRST)	
11325	03000	00060	RSH	AQ*48D	
11326	22000	00012	MUL	10D	
11327	34030	62204	RPL	Y+Q*W(HOUR)	
11330	10030	63403	ENT	Q*74000000	
11331	40030	62165	ENT	LP*W(TRST)	
11332	03000	00062	RSH	AQ*50D	
11333	14030	62203	STR	Q*W(DAY)	
11334	10030	63404	ENT	Q*1700000000	
11335	40030	62165	ENT	LP*W(TRST)	
11336	03000	00066	RSH	AQ*54D	
11337	22000	00012	MUL	10D	
11340	34030	62203	RPL	Y+Q*W(DAY)	
11341	10030	63405	ENT	Q*6000000000	
11342	40030	62165	ENT	LP*W(TRST)	
11343	07000	00002	LSH	AQ*2	
11344	22000	00144	MUL	100D	
11345	34030	62203	RPL	Y+Q*W(DAY)	
11346	11000	00423	IF	DAY*GTEQ*275D*THEN*SET*MONTH*T0*10D*AND*DAY*T0*DAY-274D*THEN	
11347	21030	62203			
11350	01400	00000			
11351	60600	11357			
11352	10000	00012			
11353	14030	62202			
11354	10000	00422			
11355	35030	62203			
11356	61000	11374			
11357	11000	00365	IF	DAY*GTEQ*245D*THEN*SET*MONTH*T0*9D*AND*DAY*T0*DAY-244D*THEN*	
11360	21030	62203			
11361	01400	00000			
11362	60600	11370			
11363	10000	00011			
11364	14030	62202			
11365	10000	00364			
11366	35030	62203			
11367	61000	11374			
11370	10000	00010	SET	MONTH*T0*8D*AND*DAY*T0*DAY-213D	
11371	14030	62202			
11372	10000	00325			
11373	35030	62203			
11374	16030	62214	ZXCV	STR	B0*W(ICCYS)
11375	10030	62202		SET	IMONTH*T0*MONTH
11376	14030	62221			SET INTERNAL TIMES TO EX CLOCK
11377	10030	62203		SET	IDAY*T0*DAY
11400	14030	62220			
11401	10030	62204		SET	IHOUR*T0*HOUR
11402	14030	62217			
11403	10030	62205		SET	IMINUTE*T0*MIN
11404	14030	62216			
11405	10030	62206		SET	ISEC*T0*SEC
11406	14030	62215			
11407	61010	11263		RETURN	
11410	62165	62165	TRSTBC	U-TAGTRST*TRST	
11411	00000	00000	COMCELL	0	
				END-PROC	TIMESYNC

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11412	00000	00000		PROCEDURE CONLOGIT
11413	14640	00000		STR Q*A*AP05
11414	14000	00000		CP Q
11415	60400	11443		JP CL4*AZERO
11416	12700	00001		ENT B7*1
11417	05000	00001	CL2	LSH Q*1
11420	60300	11424		JP CL3*GNE0
11421	71700	00015		BSK B7*130
11422	61000	11417		JP CL2
11423	61000	11426		JP CL5
11424	12707	77762	CL3	ENT B7*B7-130
11425	16750	00167		STR B7*CPL(167)
11426	10047	77760	CL5	ENT Q*X(B7-150)
11427	14000	00000		CP Q
11430	02007	00000		RSH A*B7
11431	65000	11445	CL1	RJP NATL06
11432	10000	00000		CL Q
11433	03000	00036		RSH AQ*300
11434	22030	63406		MUL 33626754
11435	03000	00044		RSH AQ*360
11436	22000	00012		MUL 12
11437	26200	00400		ADD Q*400*AP05
11440	27000	01000		SUB Q*1000
11441	01000	00011		RSH Q*90
11442	61010	11412		RETURN
11443	10040	77157	CL4	ENT Q*X77157
11444	61010	11412		JP L(CONLOGIT)
11445	61000	00000	NATL06	JP 0
11446	14070	11543		STR Q*CPW(KITTY)
11447	10000	00000		CL Q
11450	11670	00000		ENT A*A*AP05
11451	51040	77777		CP A
11452	70000	00035		RPT 290
11453	06700	00001		LSH A*1*ANE0
11454	61000	11522		JP NAT2
11455	16710	11460		STR B7*L(NAT1)
11456	06000	00030		LSH A*240
11457	15030	11545		STR A*W(KITTY+2)
11460	10040	00000	NAT1	ENT Q*X(0)
11461	26030	11543		ADD Q*W(KITTY)
11462	05000	00003		LSH Q*3
11463	26000	00004		ADD Q*4
11464	11000	00000		CL A
11465	22030	11533		MUL W(P00L)
11466	03000	00011		RSH AQ*90
11467	11470	00000		ENT A*A*AZERO
11470	61000	11530		JP NAT4
11471	14030	11544	NAT5	STR Q*W(KITTY+1)
11472	10030	11545		ENT Q*W(KITTY+2)
11473	30030	11535		ENT Y+Q*W(P00L3)
11474	15030	11546		STR A*W(KITTY+3)
11475	30030	11537		ENT Y+Q*W(P00L2)
11476	15030	11547		STR A*W(KITTY+4)
11477	30030	11541		ENT Y+Q*W(P00L1)
11500	15030	11550		STR A*W(KITTY+5)
11501	10030	11536		ENT Q*W(P00L3+1)
11502	11040	77777		ENT A*X77777
11503	07000	00027		LSH AQ*230

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11504	23030	11546		DIV	W(KITTY+3)
11505	34030	11547		RPL	Y+Q*W(KITTY+4)
11506	10030	11540		ENT	Q*W(P00L2+1)
11507	11040	77777		ENT	A*X77777
11510	07000	00027		LSH	AQ*23D
11511	23030	11547		DIV	W(KITTY+4)
11512	34030	11550		RPL	Y+Q*W(KITTY+5)
11513	10030	11542		ENT	Q*W(P00L1+1)
11514	11040	77777		ENT	A*X77777
11515	07000	00027		LSH	AQ*23D
11516	23030	11550		DIV	W(KITTY+5)
11517	26030	11544		ADD	Q*W(KITTY+1)
11520	30030	11534		ENT	Y+Q*W(P00L+1)
11521	61000	11524		JP	NAT3
11522	10040	77157	NAT2	ENT	Q*X77157
11523	61010	11412		JP	L(CONLOGIT)
11524	15000	00000	NAT3	STR	A*Q
11525	36010	11445		RPL	Y+1*L(NATL06)
11526	07000	00037		LSH	AQ*31D
11527	61010	11445		JP	L(NATL06)
11530	51440	77777	NAT4	SEL	CP*X77777*AZERO
11531	61010	11445		JP	L(NATL06)
11532	61000	11471		JP	NAT5
11533	26134	41377	P00L		2613441377
11534	01656	40206			0165640206
11535	00154	63077	P00L3		0015463077
11536	77673	61257			7767361257
11537	01015	07044	P00L2		0101507044
11540	73737	47270			7373747270
11541	05141	14431	P00L1		0514114431
11542	56626	67151			5662667151
			KITTY	RESERVE	6
				END-PROC	CONLOGIT
11551	00000	00000	CVT	PROCEDURE	CONVOLT
11552	14030	62231		STR	Q*W(TMP)
11553	10250	62231		ENT	Q*LX(TMP)*QPOS
11554	14000	00000		CP	Q
11555	22000	00024		MUL	24
11556	05000	00003		LSH	Q*3
11557	11630	62231		ENT	A*W(TMP)*APOS
11560	14000	00000		CP	Q
11561	11000	00000		CL	A
11562	61010	11551		RETURN	
				END-PROC	CONVOLT
11563	00000	00000	PK	PROCEDURE	PKS0IN
11564	12100	00000		ENT	B1*0
11565	12200	00000		ENT	B2*0
11566	12300	00000		ENT	B3*0
11567	11040	74000	START1	ENT	A*X74000
11570	10002	00000		ENT	Q*B2
11571	26001	00000		ADD	Q*B1
11572	14030	00164		STR	Q*W(00164)
11573	10064	15024		ENT	Q*UX(LEV+B4)
11574	04370	00000		COM	Q*A*YMORE
11575	14040	00000		STR	Q*A
11576	10054	15024		ENT	Q*LX(LEV+B4)
11577	04370	00000		COM	Q*A*YMORE
11600	14040	00000		STR	Q*A

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11601	12202	00011	ENT	B2*11+B2
11602	71130	62232	BSK	B1*W(WORDS)
11603	61000	11570	JP	START1+1
11604	15033	61606	STR	A*W(PEAK+B3)
11605	12203	00001	ENT	B2*B3+1
11606	71330	62233	BSK	B3*W(ITEMS)
11607	61000	11567	JP	START1
11610	12100	00000	ENT	B1*0
11611	12200	00000	ENT	B2*0
11612	12300	00090	ENT	B3*0
11613	10000	00000	PUT	0*W(TEMP)
11614	14030	62234		
11615	16030	00000	STR	B0*W(TEMP)
11616	10002	00000	ENT	Q*B2
11617	26001	00000	ADD	Q*B1
11620	14030	00164	STR	Q*W(00164)
11621	10064	15024	ENT	Q*UX(LEV+B4)
11622	22064	15024	MUL	UX(LEV+B4)
11623	65000	11700	RJP	TILT
11624	10054	15024	ENT	Q*LX(LEV+B4)
11625	22054	15024	MUL	LX(LEV+B4)
11626	65000	11700	RJP	TILT
11627	12202	00011	ENT	B2*11+B2
11630	71130	62232	BSK	B1*W(WORDS)
11631	61000	11615	JP	START2+2
11632	10030	00000	ENT	Q*W(TEMP)
11633	01000	00011	RSH	Q*90
11634	34030	62234	RPL	Y+Q*W(TEMP)
11635	10030	62234	ENT	Q*W(TEMP)
11636	22000	00020	MUL	020
11637	03000	00014	RSH	AQ*120
11640	14030	62234	STR	Q*W(TEMP)
11641	10030	62234	PUT	Y(TEMP)*W(SQIN+B3)
11642	14033	62060		
11643	12203	00001	ENT	B2*B3+1
11644	71330	62233	BSK	B3*W(ITEMS)
11645	61000	11613	JP	START2
11646	12100	00000	ENT	B1*0
11647	10030	00161	ENT	Q*W(00161)
11650	14030	00162	STR	Q*W(00162)
11651	10032	62046	ENT	Q*W(ATTEN+B2)
11652	27000	00001	SUB	Q*1
11653	22000	00240	MUL	240
11654	14031	62072	STR	Q*W(CATT+B1)
11655	71130	62233	BSK	B1*W(ITEMS)
11656	61000	11647	JP	CONVERT
11657	10031	61600	ENT	Q*W(PEAK+B1)
11660	65000	11551	CONVOLT	
11661	65000	11412	CONVOLT	
11662	22000	00002	MUL	2
11663	26031	62072	ADD	Q*W(CATT+B1)
11664	27031	61652	SUB	Q*W(CALPK+B1)
11665	14031	61606	STR	Q*W(PEAK+B1)
11666	71130	62233	BSK	B1*W(ITEMS)
11667	61000	11657	JP	PEAK1
11670	10031	62060	ENT	Q*W(SWIN+B1)
11671	65000	11412	CONVOLT	
11672	26031	62072	ADD	Q*W(CATT+B1)

START2

CONVERT

PEAK1

SWIN1

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11673	27031	61620		SUB Q*W(CALIN+B1)
11674	14031	62060		STR Q*W(SQIN+B1)
11675	71130	62233		BSK B1*W(ITEMS)
11676	61000	11670		JP SQIN1
11677	61010	11563		RETURN
				END=PROC PKSQIN
11700	12000	00000	TILT	NO-OP
11701	22000	00620		MUL 620
11702	07000	00025		LSH AQ*210
11703	24030	62234		RPL A+Y*W(TEMP)
11704	05000	00011		LSH Q*90
11705	34030	00000		RPL Y+Q*W(TEMP)
11706	61010	11700		JP L(TILT)
11707	00000	00000		PROCEDURE SNCORRECT
11710	14030	62234		STR Q*W(TEMP)
11711	12100	00000		ENT B1*0
11712	10030	62234		ENT Q*W(TEMP)
11713	27670	00000		SUB Q*A*GPOS
11714	14000	00000		CP Q
11715	31521	11731	TABL	ENT Y-Q*U(SNCK+B1)*ANOT
11716	61000	11724		JP FIND1
11717	71100	00167		BSK B1*1190
11720	61000	11715		JP TABL
11721	10030	62234		ENT Q*W(TEMP)
11722	11000	00000		CL A
11723	61010	11707		RETURN
11724	11011	11731	FIND1	ENT A*L(SNCK+B1)
11725	10030	62234		ENT Q*W(TEMP)
11726	27070	00000		SUB Q*A
11727	11000	00000		CL A
11730	61000	11723		RETURN
11731	00140	00000	SNCK	0014000000
11732	00137	00000		0013700000
11733	00136	00000		0013600000
11734	00135	00001		0013500001
11735	00134	00001		0013400001
11736	00134	00001		0013400001
11737	00133	00001		0013300001
11740	00132	00001		0013200001
11741	00131	00001		0013100001
11742	00130	00001		0013000001
11743	00130	00002		0013000002
11744	00127	00002		0012700002
11745	00126	00002		0012600002
11746	00125	00002		0012500002
11747	00124	00002		0012400002
11750	00124	00002		124 2
11751	00123	00003		123 3
11752	00122	00003		122 3
11753	00121	00003		121 3
11754	00120	00003		120 3
11755	00120	00003		120 3
11756	00117	00003		117 3
11757	00116	00004		116 4
11760	00115	00004		115 4
11761	00114	00004		114 4
11762	00114	00004		114 4
11763	00113	00004		113 4

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11764	00112	00004	112	4
11765	00111	00004	111	4
11766	00110	00004	110	4
11767	00110	00004	110	4
11770	00107	00005	107	5
11771	00106	00005	106	5
11772	00105	00005	105	5
11773	00104	00005	104	5
11774	00104	00005	104	5
11775	00103	00006	103	6
11776	00102	00006	102	6
11777	00101	00006	101	6
12000	00100	00006	100	6
12001	00100	00007	100	7
12002	00077	00007	77	7
12003	00076	00007	76	7
12004	00075	00007	75	7
12005	00074	00010	74	10
12006	00074	00010	74	10
12007	00073	00010	73	10
12010	00072	00010	72	10
12011	00071	00010	71	10
12012	00070	00010	70	10
12013	00070	00010	70	10
12014	00067	00011	67	11
12015	00066	00011	66	11
12016	00065	00011	65	11
12017	00064	00012	64	12
12020	00064	00012	64	12
12021	00063	00012	63	12
12022	00062	00013	62	13
12023	00061	00013	61	13
12024	00060	00013	60	13
12025	00060	00014	60	14
12026	00057	00014	57	14
12027	00056	00014	56	14
12030	00055	00014	55	14
12031	00054	00014	54	14
12032	00054	00014	54	14
12033	00053	00015	53	15
12034	00052	00015	52	15
12035	00051	00016	51	16
12036	00050	00016	50	16
12037	00050	00016	50	16
12040	00047	00017	47	17
12041	00046	00017	46	17
12042	00045	00020	45	20
12043	00044	00020	44	20
12044	00044	00020	44	20
12045	00043	00020	43	20
12046	00042	00020	42	20
12047	00041	00021	41	21
12050	00040	00021	40	21
12051	00040	00022	40	22
12052	00037	00022	37	22
12053	00036	00023	36	23
12054	00035	00023	35	23
12055	00034	00024	34	24

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12056	00034	00024	34	24
12057	00033	00024	33	24
12060	00032	00025	32	25
12061	00031	00026	31	26
12062	00030	00027	30	27
12063	00030	00030	30	30
12064	00027	00030	27	30
12065	00026	00030	26	30
12066	00025	00031	25	31
12067	00024	00032	24	32
12070	00024	00033	24	33
12071	00023	00034	23	34
12072	00022	00034	22	34
12073	00021	00036	21	36
12074	00020	00037	20	37
12075	00020	00040	20	40
12076	00017	00041	17	41
12077	00016	00042	16	42
12100	00015	00044	15	44
12101	00014	00045	14	45
12102	00014	00047	14	47
12103	00013	00051	13	51
12104	00012	00054	12	54
12105	00011	00056	11	56
12106	00010	00061	10	61
12107	00010	00064	10	64
12110	00007	00070	7	70
12111	00006	00074	6	74
12112	00005	00102	5	102
12113	00004	00110	4	110
12114	00004	00117	4	117
12115	00003	00120	3	120
12116	00002	00120	2	120
12117	00001	00120	1	120
12120	00000	00120	0	120
				END-PROC SNCORRECT
				PROCEDURE SNRATIO
12121	00000	00000	ENT B1*0	
12122	12100	00000	ENT B1*0	
12123	10030	00161	AGAIN	ENT Q*W(00161)
12124	14030	00162		STR Q*W(00162)
12125	10032	62034		ENT Q*W(NATT+B2)
12126	27000	00001		SUB Q*1
12127	22000	00240		MUL 240
12130	14031	62022		STR Q*W(NAT+B1)
12131	71130	62233		BSK B1*W(ITEMS)
12132	61000	12123		JP AGAIN
12133	10031	62104	PROCS	ENT Q*W(GSXI+B1)
12134	22000	00020		MUL 20
12135	03000	00006		RSH AQ*6
12136	16130	62235		STR B1*W(STRE)
12137	65000	11412		CONLOGIT
12140	12130	62235		ENT B1*W(STRE)
12141	26031	62022	GCJ	ADD Q*W(NAT+B1)
12142	27031	61620		SUB Q*W(CALIN2+B1)
12143	14031	61574		STR Q*W(NOS+B1)
12144	14030	62236		STR Q*W(TEMP3)
12145	14040	00000		STR Q*A
12146	10031	62060		ENT Q*W(SQIN+B1)

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12147	16130	62235		STR B1*W(STRE)
12150	65000	11707		SNCORRECT
12151	12130	62235		ENT B1*W(STRE)
12152	14031	61536		STR Q*W(SIG+B1)
12153	27030	62236		SUB Q*W(TEMP3)
12154	14031	61562	SN6T	STR Q*W(SNTAB+B1)
12155	71130	62233		BSK B1*W(ITEMS)
12156	61000	12133		JP PROCS
12157	61010	12121		RETURN
				END-PROC SNRATIO
12160	00000	00000		PROCEDURE PROPLLOSS
12161	12200	00000		ENT B2*0
12162	12100	00000		ENT B1*0
12163	11030	62210		ENT A*W(CODEWORD)
12164	21500	00001		SUB A*1*ANOT
12165	61000	12201		JP PROP1
12166	21500	00001		SUB A*1*ANOT
12167	61000	12211		JP PROP2
12170	21500	00001		SUB A*1*ANOT
12171	61000	12221		JP PROP3
12172	21500	00001		SUB A*1*ANOT
12173	61000	12231		JP PROP4
12174	21500	00001		SUB A*1*ANOT
12175	61000	12241		JP PROP5
12176	21500	00001		SUB A*1*ANOT
12177	61000	12251		JP PROP6
12200	61000	12261		JP PROP7
12201	10032	61714	PROP1	ENT Q*W(AGSL+B2)
12202	27031	61536		SUB Q*W(SIG+B1)
12203	14031	61550		STR Q*W(PROPL+B1)
12204	71200	00011		BSK B2*11
12205	12000	00000		NO-OP
12206	71130	62233		BSK B1*W(ITEMS)
12207	61000	12201		JP PROP1
12210	61010	12160		RETURN
12211	10032	61726	PROP2	ENT Q*W(SLE1+B2)
12212	27031	61536		SUB Q*W(SIG+B1)
12213	14031	61550		STR Q*W(PROPL+B1)
12214	71200	00011		BSK B2*11
12215	12000	00000		NO-OP
12216	71130	62233		BSK B1*W(ITEMS)
12217	61000	12211		JP PROP2
12220	61000	12210		RETURN
12221	10032	61740	PROP3	ENT Q*W(SLE1+B2)
12222	27031	61536		SUB Q*W(SIG+B1)
12223	14031	61550		STR Q*W(PROPL+B1)
12224	71200	00011		BSK B2*11
12225	12000	00000		NO-OP
12226	71130	62233		BSK B1*W(ITEMS)
12227	61000	12221		JP PROP3
12230	61000	12210		RETURN
12231	10032	61752	PROP4	ENT Q*W(SLE2+B2)
12232	27031	61536		SUB Q*W(SIG+B1)
12233	14031	61550		STR Q*W(PROPL+B1)
12234	71200	00011		BSK B2*11
12235	12000	00000		NO-OP
12236	71130	62233		BSK B1*W(ITEMS)
12237	61000	12231		JP PROP4

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12240	61000	12210		RETURN	
12241	10032	61764	PROP5	ENT Q*W(SLE3+B2)	
12242	27031	61536		SUB Q*W(SIG+B1)	
12243	14031	61550		STR Q*W(PROPL+B1)	
12244	71200	00011		BSK B2*11	
12245	12000	00000		NO-OP	
12246	71130	62233		BSK B1*W(ITEMS)	
12247	61000	12241		JP PROP5	
12250	61000	12210		RETURN	
12251	10032	61776	PROP6	ENT Q*W(SLE4+B2)	
12252	27031	61536		SUB Q*W(SIG+B1)	
12253	14031	61550		STR Q*W(PROPL+B1)	
12254	71200	00011		BSK B2*11	
12255	12000	00000		NO-OP	
12256	71130	62233		BSK B1*W(ITEMS)	
12257	61000	12251		JP PROP6	
12260	61000	12210		RETURN	
12261	10032	62010	PROP7	ENT Q*W(SLE5+B2)	
12262	27031	61536		SUB Q*W(SIG+B1)	
12263	14031	61550		STR Q*W(PROPL+B1)	
12264	71200	00011		BSK B2*11	
12265	12000	00000		NO-OP	
12266	71130	62233		BSK B1*W(ITEMS)	
12267	61000	12261		JP PROP7	
12270	61000	12210		RETURN	
12271	00000	00000		END-PROC PROPLLOSS	
12272	65000	11563		PROCEDURE PHASE1M	
12273	65000	12121		PKSQIN	
12274	65000	12160		SNRATIO	
12275	61010	12271		PROPLLOSS	
12276	00000	00000		RETURN	
12277	10010	61651		END-PROC PHASE1M	
12300	14030	62251		PROCEDURE TVLTM RANGE	
12301	10020	61651		ENT Q*L(ID+5)	
12302	22000	01750		STR Q*W(ZETA)	
12303	34030	62251		ENT Q*U(ID+5)	SECONDS
12304	10010	61650		MUL 10000	
12305	22030	63407		RPL Y+Q*W(ZETA)	
12306	34030	62251		ENT Q*L(ID+4)	NINUTES
12307	10030	62250		MUL 600000	
12310	35030	62251		RPL Y+Q*W(ZETA)	ZETA IS RECEIVED TIME IN MILLISECON
12311	11030	62251	TTE	SET ZETA*T0*ZETA-ALPHA	
12312	60600	12316		IF ZETA*LT*0*THEN*SET*ZETA*TV*ZETA+36000000*THEN*GOTO*TTE	
12313	11030	63410			
12314	24030	62251			
12315	61000	12311			
12316	11030	62251		SET RANGE*T0*ZETA+5/100	
12317	20000	00005			
12320	03000	00036			
12321	23000	00012			
12322	14030	61535			
12323	22030	15004		SET RANGE*T0*(RANGE)(SDVEL)+5000/10000	
12324	30000	00764			
12325	03000	00036			
12326	23000	01750			
12327	14030	61535			

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12330 61010 12276

12331 00000 00000
12332 73270 14744
12333 13260 12661
12334 70000 00006
12335 12000 00000
12336 73270 12660
12337 13260 12662
12340 61010 12331

RETURN
END-PROC TVLTM RANGE
PROCEDURE GIN
IN SAMPLE*W(AUBF)
EX-COM SAMPLE*W(GADEF1)
RPT 6
NO-OP
IN SAMPLE*W(GBUFIN)
EX-COM SAMPLE*W(GADEF2)
RETURN

12341 00000 00000
12342 12100 00000
12343 12200 00000
12344 16031 62104
12345 71100 00011
12346 61000 12344

GCLR

END-PROC GIN
PROCEDURE GNOISE*INPUT*MTN
ENT B1*0
ENT B2*0
STR B0*W(GSX1+B1)
BSK B1*90
JP GCLR
PUT W(GMTEF3)*W(GMTEF2)

12347 10030 12665
12350 14030 12664
12351 10030 12667
12352 14030 12666
12353 10030 12671
12354 14030 12670
12355 10030 12673
12356 14030 12672
12357 10000 07246
12360 14030 62237
12361 10000 00002
12362 22010 62163
12363 26000 00001
12364 34030 12664
12365 34030 12666
12366 34030 12670
12367 34030 12672
12370 11530 62212
12371 61000 12407
12372 16030 62212
12373 16030 62257
12374 13370 12670
12375 11530 62257
12376 61000 12375
12377 16030 62257
12400 13370 12670
12401 11530 62257
12402 61000 12401
12403 16030 62257
12404 13370 12672
12405 11530 62257
12406 61000 12405
12407 16030 12675
12410 16030 12676
12411 65000 12631
12412 10030 62163
12413 14030 62143
12414 16020 62144
12415 16010 62144
12416 10010 62221
12417 14020 62145

PUT W(GMTEF5)*W(GMTEF4)
PUT W(GMTEF7)*W(GMTEF6)
PUT W(GMTEF9)*W(GMTEF8)
PUT 37500*W(GSN)

ENT Q*2
MUL L(MTN)
ADD Q*1
RPL Y+Q*W(GMTEF2)
RPL Y+Q*W(GMTEF4)
RPL Y+Q*W(GMTEF6)
RPL Y+Q*W(GMTEF8)
ENT A*W(RESET)*ANOT
JP GTEDDI
STR B0*W(RESET)
STR B0*W(TFLAG)
EX-COM MAGGY*W(GMTEF6)*FORCE
ENT A*W(TFLAG)*ANOT
JP GMIN
STR B0*W(TFLAG)
EX-COM MAGGY*W(GMTEF6)*FORCE
ENT A*W(TFLAG)*ANOT
JP GCHRIS
STR B0*W(TFLAG)
EX-COM MAGGY*W(GMTEF8)*FORCE
ENT A*W(TFLAG)*ANOT
JP GLEA
STR B0*W(GBAG)
STR B0*W(GAS)
RJP NATTAB
PUT W(MTN)*W(GID)

GMIN

GCHRIS

GLEA

GTEDDI

STR B0*U(GID+1)
STR B0*L(GID+1)
PUT L(IMONTH)*U(GID+2)

12420	10010	62220		PUT	L(IDAY)*L(GID+2)
12421	14010	62145			
12422	10010	62217		PUT	L(1HOUR)*U(GID+3)
12423	14020	62146			
12424	10010	62216		PUT	L(1MINUTE)*L(GID+3)
12425	14010	62146			
12426	10010	62215		PUT	L(1SEC)*U(GID+4)
12427	14020	62147			
12430	12000	00000		NO-OP	
12431	74370	12674		OUT	MAGGY*W(GBUFID)*FORCE
12432	13370	12664		EX-COM	MAGGY*W(GMTEF2)*FORCE
12433	12100	00000	GAGN	ENT	B1*0
12434	12200	00000		ENT	B2*0
12435	12300	00000		ENT	B3*0
12436	12400	00000		ENT	B4*0
12437	12500	00000		ENT	B5*0
12440	12600	00000		ENT	B6*0
12441	12700	00000		ENT	B7*0
12442	10030	00160		ENT	Q*W(CLOCK)
12443	26000	00004		ADD	Q*4
12444	14030	62240		STR	Q*W(GTIMER)
12445	11030	00160	GALPHA	ENT	A*W(160)
12446	21630	62240		SUB	A*W(GTIMER)*APOS
12447	61000	12445		JP	GALPHA
12450	11000	00004		ENT	A*4
12451	24030	62240		RPL	A+Y*W(GTIMER)
12452	65000	12331		GIN	
12453	71700	00004	GH0	BSK	B7*4
12454	61000	12453		JP	GH0
12455	11410	12675		ENT	A*L(GBAG)*AZERO
12456	61000	12471		JP	GPACL
12457	10056	62131	GPACU	ENT	Q*LX(GTHRESH+B6)
12460	14021	15024		STR	Q*U(GHIGH+B1)
12461	22056	62131		MUL	LX(GTHRESH+B6)
12462	34036	62104		RPL	Y+Q*W(GSXI+B6)
12463	12101	00001	GCON1	ENT	B1*B1+1
12464	71600	00002		BSK	B6*2
12465	61000	12457		JP	GPACU
12466	16050	12675		STR	B0*CPL(GBAG)
12467	12101	77774		ENT	B1*B1-3
12470	61000	12501		JP	GQ
12471	10056	62131	GPACL	ENT	Q*LX(GTHRESH+B6)
12472	14011	15024		STR	Q*L(GHIGH+B1)
12473	22056	62131		MUL	LX(GTHRESH+B6)
12474	34036	62104		RPL	Y+Q*W(GSXI+B6)
12475	12101	00001	GCON2	ENT	B1*B1+1
12476	71600	00002		BSK	B6*2
12477	61000	12471		JP	GPACL
12500	16010	12675		STR	B0*L(GBAG)
12501	71300	02335	GQ	BSK	B3*12450
12502	11400	00000		ENT	A*0*AZERO
12503	61000	12511		JP	GOUTH1
12504	71100	03523	GQQ	BSK	B1*18750
12505	72100	12506		BJP	B1*GWEST
12506	71500	00030	GWEST	BSK	B5*240
12507	12000	00000		NO-OP	
12510	61000	12514		JP	GSLOPAC
12511	74370	12656	GOUTH1	OUT	MAGGY*W(GBUFH1)*FORCE

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12512	13370	12664		EX-COM	MAGGY*W(GMTEF2)*FORCE
12513	61000	12504		JP	GGG
12514	12600	00003	GSLOPAC	ENT	B6*3
12515	11410	12676		ENT	A*L(GAS)*AZERO
12516	61000	12531		JP	GSLOLO
12517	10056	62131	GSLOUP	ENT	Q*LX(GTHRESH+B6)
12520	14022	20547		STR	Q*U(GSL0+B2)
12521	22056	62131		MUL	LX(GTHRESH+B6)
12522	34036	62104		RPL	Y+Q*W(GSXI+B6)
12523	12202	00001		ENT	B2*B2+1
12524	71600	00011		BSK	B6*9D
12525	61000	12517		JP	GSLOUP
12526	16050	12676		STR	B0*CPL(GAS)
12527	12202	77770		ENT	B2*B2-7
12530	61000	12541		JP	GFULL
12531	10056	62131	GSLOLO	ENT	Q*LX(GTHRESH+B6)
12532	14012	20547		STR	Q*L(GSL0+B2)
12533	22056	62131		MUL	LX(GTHRESH+B6)
12534	34036	62104		RPL	Y+Q*W(GSXI+B6)
12535	12202	00001		ENT	B2*B2+1
12536	71600	00011		BSK	B6*9D
12537	61000	12531		JP	GSLOLO
12540	16010	12676		STR	B0*L(GAS)
12541	71400	07245	GFULL	BSK	B4*3749D
12542	61000	12445		JP	GALPHA
12543	63340	12543	GPIING	JP	GPIING*MAG00
12544	12000	00000	GSAM	N0-0P	
12545	71400	23420		BSK	B4*10000D
12546	61000	12544		JP	GSAM
12547	74370	12657		OUT	MAGGY*W(GBUFSLO)*FORCE
12550	13370	12664		EX-COM	MAGGY*W(GMTEF2)*FORCE
12551	11520	62163		ENT	A*U(MTN)*ANOT
12552	61000	12573		JP	GDIVN
12553	16060	12676		STR	B0*CPU(GAS)
12554	16020	62163		STR	B0*U(MTN)
12555	10000	16514		PUT	7500D*W(GSN)
12556	14030	62237			
12557	61000	12433		JP	GAGN
12560	10034	62104	GCONVOLT	ENT	Q*W(GSXI+B4)
12561	22030	63411		MUL	62000000
12562	15034	62104		STR	A*W(GSXI+B4)
12563	71400	00011		BSK	B4*9D
12564	61000	12560		JP	GCONVOLT
12565	10034	62116	GCONVOLT1	ENT	Q*W(GSXI+B4)
12566	22030	63411		MUL	62000000
12567	15034	62116		STR	A*W(GSXI+B4)
12570	71400	00011		BSK	B4*9D
12571	61000	12565		JP	GCONVOLT1
12572	61000	12623		JP	GPONG
12573	10034	62104	GDIVN	ENT	Q*W(GSXI+B4)
12574	11000	00000		CL	A
12575	23030	62237		DIV	W(GSN)
12576	14034	62116		STR	Q*W(GSXI+B4)
12577	71400	00002		BSK	B4*2
12600	61000	12573		JP	GDIVN
12601	12400	00003		ENT	B4*3
12602	11000	00000	GDIVNSLO	CL	A
12603	10034	62104		ENT	Q*W(GSXI+B4)

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12604	23030	62237		DIV	W(GSN)
12605	14034	62116		STR	Q*W(GSXIN+B4)
12606	71400	00011		BSK	B4*90
12607	61000	12602		JP	GDIVNSLO
12610	10034	62116	GSQRT	ENT	Q*W(GSXIN+B4)
12611	23070	00000		SQRT	
12612	14034	12644		STR	Q*W(GRMS+B4)
12613	71400	00011		BSK	B4*90
12614	61000	12610		JP	GSQRT
12615	10034	12644	GHOLD	ENT	Q*W(GRMS+B4)
12616	22000	00003		MUL	3
12617	14034	62131		STR	Q*W(GTHRESH+B4)
12620	71400	00011		BSK	B4*90
12621	61000	12615		JP	GHOLD
12622	61000	12560		JP	GCONVOLT
12623	63340	12623	GPONG	JP	GPONG*HAGUO
12624	12000	00000	GBILL	NO-OP	
12625	71400	23420		BSK	B4*100000
12626	61000	12624		JP	GBILL
12627	13370	12666		EX-COM	HAGGY*W(GMTEF4)*FORCE
12630	61010	12341		RETURN	
12631	00000	00000	NATTAB	ENTRY	
12632	11031	62034	GSTUFF	ENT	A*W(NATT+B1)
12633	15022	62150		STR	A*U(GNATT+B2)
12634	12101	00001		ENT	B1*B1+1
12635	11031	62034		ENT	A*W(NATT+B1)
12636	15012	62150		STR	A*L(GNATT+B2)
12637	12202	00001		ENT	B2*B2+1
12640	71100	00011		BSK	B1*90
12641	61000	12632		JP	GSTUFF
12642	12200	00000		ENT	B2*0
12643	61010	12631		EXIT	
			GRMS	RESERVE	100
12656	20546	15024	GBUFH1	U-TAGGHIGH+18740*GHIGH	
12657	52254	20547	GBUFSLO	U-TAGGSLO+131250*GSL0	
12660	62142	62130	GBUFIN	U-TAGGTHRESH+90*GARBAE2	
12661	00000	00400	GADEF1	0 400	
12662	00000	00140	GADEF2	140	
12663	00006	00000	GMTEF1	600000	
12664	00000	53250	GMTEF2	53250	
12665	00000	53250	GMTEF3	53250	
12666	00000	73250	GMTEF4	73250	
12667	00000	73250	GMTEF5	73250	
12670	00001	17250	GMTEF6	117250	
12671	00001	17250	GMTEF7	117250	
12672	00000	17250	GMTEF8	017250	
12673	00000	17250	GMTEF9	017250	
12674	62202	62143	GBUFD	U-TAGGID+310*GID	
			GBAG	RESERVE 1	
12676	00000	00000	GAS	0	
				END-PROC	GNOISE
12677	00000	00000	GTT	PROCEDURE	GTTY
12700	15030	13365		STR	A*W(ASTORE)
12701	14030	13366		STR	Q*W(QSTORE)
12702	10030	00167		PUT	W(00167)*W(BSTORE)
12703	14030	13367			
12704	17330	13372		STR	TELY*W(THOLD)
12705	10000	00777		ENT	Q*777

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12706 11030 13372
12707 43400 00101
12710 61000 12713
12711 65000 01002
12712 61000 12745
12713 43500 00106
12714 61000 12734
12715 43500 00104
12716 61000 12752
12717 43500 00122
12720 61000 12775
12721 43500 00125
12722 61000 12770
12723 43500 00103
12724 61000 12732
12725 43500 00120
12726 61000 13030
12727 43500 00107
12730 61000 13000
12731 61000 12745
12732 12000 00000
12733 61000 12745
12734 10000 00001
12735 14030 62172
12736 12700 00000
12737 10000 00006
12740 14037 62253
12741 71700 00002
12742 61000 12737
12743 13320 13404
12744 13320 13405
12745 10030 13367
12746 14030 00167
12747 11030 13365
12750 10030 13366
12751 60110 12677
12752 11430 62262
12753 61000 13266
12754 11000 00003
12755 24030 62226
12756 10030 62226
12757 22000 00001
12760 26200 00000
12761 14000 00000
12762 27600 00006
12763 61000 12745
12764 10600 00006
12765 14000 00000
12766 14030 62226
12767 61000 12745
12770 11430 62262
12771 61000 13302
12772 10000 00003
12773 35030 62226
12774 61000 12756
12775 10000 00001
12776 14030 62212
12777 61000 12743

GTT1

GTTT

GTTT

CONTIN

GTTD

GTTD1

GTTU

GTTT

ENT A*W(THOLD)
COM MASK*101*AZERO
JP GTT1
RJP KEYIN
JP CONTIN+2
COM MASK*106*ANOT
JP GTTF
COM MASK*104*ANOT
JP GTTD
COM MASK*122*ANOT
JP GTTR
COM MASK*125*ANOT
JP GTTU
COM MASK*103*ANOT
JP GTTC
COM MASK*120*ANOT
JP GTTP
COM MASK*107*ANOT
JP GTTG
JP CONTIN+2
NO-OP
JP CONTIN+2
SET FORCE*T0*1

ENT B7*0
ENT Q*6
STR Q*W(THCTR1+B7)
BSK B7*2
JP GTTF+3
EX-COM TELY*W(MACL)
EX-COM TELY*W(KEX)
PUT W(BSTORE)*W(00167)

ENT A*W(ASTORE)
ENT Q*W(QSTORE)
RETURN RIL
ENT A*W(CFLAG)*AZERO
JP GTTD1A
SET CHANGE*T0*CHANGE+3

ENT Q*W(CHANGE)
MUL 1
ADD Q*0*AP0S
CP Q
SUB Q*6*QP0S
JP CONTIN+2
ENT Q*6*AP0S
CP Q
STR Q*W(CHANGE)
JP CONTIN+2
ENT A*W(CFLAG)*AZERO
JP GTTU1A
SET CHANGE*T0*CHANGE-3

JP GTTD1
SET RESET*T0*1

JP CONTIN

PUT CODE IN A

TEST FOR F

TEST FOR D

TEST FOR R

TEST FOR U

TEST FOR C

TEST FOR P

TEST FOR G

ILLEGAL CODE... IGNORE IT

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13000	13320	13404	6TT6	EX-COM	TELY*W(MACL)	
13001	13320	13405		EX-COM	TELY*W(KEX)	
13002	10030	13373		PUT	W(RESTAT)*W(INM)	
13003	14030	00046				
13004	75330	13403		IN	TELY*W(BUFFET)*MONITOR	
13005	61000	12745		JP	CONTIN+2	
13006	15030	13365	6TT61	STR	A*W(ASTORE)	
13007	14030	13366		STR	Q*W(OSTORE)	
13010	10030	00167		PUT	W(00167)*W(BSTORE)	
13011	14030	13367				
13012	11030	13371		ENT	A*W(KAT)	
13013	21000	00100		SUB	A*100	
13014	70000	00016		RPT	16	
13015	21400	00001		SUB	A*1-AZERO	
13016	61000	13000		JP	6TT6	
13017	10000	00015		ENT	Q*15	
13020	27010	00167		SUB	Q*L(00167)	
13021	14030	13370		STR	Q*W(THD)	
13022	10000	00001		ENT	Q*1	
13023	05030	13370		LSM	Q*W(THD)	
13024	11010	62222		ENT	A*L(RLM)	
13025	53040	77777		SEL	SU*X77777	
13026	15010	62222		STR	A*L(RLM)	
13027	61000	12745		JP	CONTIN+2	
13030	13320	13404	6TTP	EX-COM	TELY*W(MACL)	
13031	13320	13405		EX-COM	TELY*W(KEX)	
13032	10030	13374		PUT	W(RESTAT1)*W(INM)	
13033	14030	00046				
13034	75330	13403		IN	TELY*W(BUFFET)*MONITOR	
13035	61000	12745		JP	CONTIN+2	
13036	15030	13365	6TTP1	STR	A*W(ASTORE)	
13037	14030	13366		STR	Q*W(OSTORE)	
13040	10030	00167		PUT	W(00167)*W(BSTORE)	
13041	14030	13367				
13042	10000	00777		ENT	Q*777	
13043	11030	13371		ENT	A*W(KAT)	
13044	43500	00101		COM	MASK*101*ANOT	TEST FOR A
13045	61000	13132		JP	6TTA	
13046	43500	00123		COM	MASK*123*ANOT	TEST FOR S
13047	61000	13210		JP	6TTS	
13050	43500	00124		COM	MASK*124*ANOT	TEST FOR T
13051	61000	13054		JP	6TTT	
13052	61000	13030		JP	6TTP	
13053	61000	12745		JP	CONTIN+2	
13054	13320	13404	6TTT	EX-COM	TELY*W(MACL)	
13055	13320	13405		EX-COM	TELY*W(KEX)	
13056	10030	13375		PUT	W(RESTAT2)*W(INM)	
13057	14030	00046				
13060	75330	13403		IN	TELY*W(BUFFET)*MONITOR	
13061	61000	12745		JP	CONTIN+2	
13062	15030	13365	6TTT1	STR	A*W(ASTORE)	
13063	14030	13366		STR	Q*W(OSTORE)	
13064	10030	00167		PUT	W(00167)*W(BSTORE)	
13065	14030	13367				
13066	10030	13371		ENT	Q*W(KAT)	
13067	11000	00066		ENT	A*66	
13070	04370	00000		COM	Q*A*YMORE	
13071	61000	13054		JP	6TTT	

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13072	11030	13371	ENT	A*W(KAT)
13073	21600	00061	SUB	A*61*AP0S
13074	61000	13054	JP	6TTT
13075	27000	00060	SUB	Q*60
13076	14040	00000	STR	Q*A
13077	27000	00001	SUB	Q*1
13100	05000	00003	LSH	Q*3
13101	26070	00000	ADD	Q*A
13102	14030	13370	STR	Q*W(THD)
13103	13320	13404	EX-COM	TELY*W(MACL)
13104	13320	13405	EX-COM	TELY*W(KEX)
13105	10030	13376	PUT	W(RESTAT3)*W(INM)
13106	14030	00046		
13107	75330	13403	IN	TELY*W(BUFFET)*MONITOR
13110	61000	12745	JP	CONTIN+2
13111	15030	13365	STR	A*W(ASTORE)
13112	16730	13367	STR	B7*W(BSTORE)
13113	14030	13366	STR	Q*W(OSTORE)
13114	10030	13371	ENT	Q*W(KAT)
13115	11000	00072	ENT	A*72
13116	04370	00000	COM	Q*A*YMORE
13117	61000	13103	JP	6TTT3
13120	11030	13371	ENT	A*W(KAT)
13121	21600	00061	SUB	A*61*AP0S
13122	61000	13103	JP	6TTT3
13123	27000	00061	SUB	Q*61
13124	26030	13370	ADD	Q*W(THD)
13125	11030	62223	ENT	A*W(RLMTTY)
13126	52000	00077	SEL	CL*77
13127	26070	00000	ADD	Q*A
13130	14030	62223	STR	Q*W(RLMTTY)
13131	61000	12745	JP	CONTIN+2
13132	13320	13404	EX-COM	TELY*W(MACL)
13133	13320	13405	EX-COM	TELY*W(KEX)
13134	10030	13377	PUT	W(RESTAT4)*W(INM)
13135	14030	00046		
13136	75330	13403	IN	TELY*W(BUFFET)*MONITOR
13137	61000	12745	JP	CONTIN+2
13140	15030	13365	STR	A*W(ASTORE)
13141	14030	13366	STR	Q*W(OSTORE)
13142	10030	00167	PUT	W(00167)*W(BSTORE)
13143	14030	13367		
13144	10030	13371	ENT	Q*W(KAT)
13145	1000	00063	ENT	A*63
13146	4370	00000	COM	Q*A*YMORE
13147	61000	13132	JP	6TTA
13150	11030	13371	ENT	A*W(KAT)
13151	21600	00061	SUB	A*61*AP0S
13152	6100	13132	JP	6TTA
13153	27000	00061	SUB	Q*61
13154	14040	00000	STR	Q*A
13155	1000	00003	LSH	A*3
13156	15030	13370	STR	A*W(THD)
13157	13320	13404	EX-COM	TELY*W(MACL)
13160	13320	13405	EX-COM	TELY*W(KEX)
13161	10030	13402	PUT	W(RESTAT7)*W(INM)
13162	14030	00046		
13163	75330	13403	IN	TELY*W(BUFFET)*MONITOR

6TTT3

6TTT2

6TTA

6TTA1

6TTA3

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13164	61000	12745	JP	CONTIN+2
13165	15030	13368	STR	A=W(ASTORE)
13166	14030	13366	STR	Q=W(USTORE)
13167	10030	00167	PUT	W(00167)*W(BSTORE)
13170	14030	13367		
13171	10030	13371	ENT	Q=W(KAT)
13172	11000	00071	ENT	A=71
13173	04370	00000	COM	Q=A*YMORE
13174	61000	13157	JP	GTTS3
13175	11030	13371	ENT	A=W(KAT)
13176	21600	00061	SUB	A=61*AP05
13177	61000	13157	JP	GTTS3
13200	27000	00060	SUB	Q=60
13201	26030	13370	ADD	Q=W(TMD)
13202	11030	62223	ENT	A=W(RLMTTY)
13203	52000	07700	SEL	CL=7700
13204	05000	00006	LSH	Q=6
13205	26070	00000	ADD	Q=A
13206	14030	62223	STR	Q=W(RLMTTY)
13207	61000	12745	JP	CONTIN+2
13210	13320	13404	EX-COM	TELY=W(MACL)
13211	13320	13405	EX-COM	TELY=W(KEX)
13212	75330	13403	IN	TELY=W(BUFFET)*MONITOR
13213	10030	13400	PUT	W(RESTAT5)*W(INM)
13214	14030	00046		
13215	61000	12745	JP	CONTIN+2
13216	15030	13365	STR	A=W(ASTORE)
13217	14030	13366	STR	Q=W(USTORE)
13220	10030	00167	PUT	W(00167)*W(BSTORE)
13221	14030	13367		
13222	10030	13371	ENT	Q=W(KAT)
13223	11000	00065	ENT	A=65
13224	04370	00000	COM	Q=A*YMORE
13225	61000	13210	JP	GTTS
13226	11030	13371	ENT	A=W(KAT)
13227	21600	00061	SUB	A=61*AP05
13230	61000	13210	JP	GTTS
13231	27000	00062	SUB	Q=62
13232	14040	00000	STR	Q=A
13233	06000	00003	LSH	A=3
13234	15030	13370	STR	A=W(TMD)
13235	13320	13404	EX-COM	TELY=W(MACL)
13236	13320	13405	EX-COM	TELY=W(KEX)
13237	10030	13401	PUT	W(RESTAT6)*W(INM)
13240	14030	00046		
13241	75330	13403	IN	TELY=W(BUFFET)*MONITOR
13242	61000	12745	JP	CONTIN+2
13243	15030	13365	STR	A=W(ASTORE)
13244	14030	13366	STR	Q=W(USTORE)
13245	10030	00167	PUT	W(00167)*W(BSTORE)
13246	14030	13367		
13247	10030	13371	ENT	Q=W(KAT)
13250	11000	00071	ENT	A=71
13251	04370	00000	COM	Q=A*YMORE
13252	61000	13235	JP	GTTS3
13253	11030	13371	ENT	A=W(KAT)
13254	21600	00061	SUB	A=61*AP05
13255	61000	13235	JP	GTTS3

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13256	27000	00060	SUB	0*60
13257	26030	13370	ADD	0*W(THO)
13260	11030	62223	ENT	A*W(RLMTTY)
13261	52030	63*12	SEL	CL*770000
13262	05000	00014	LSH	0*120
13263	20070	00000	ADD	0*A
13264	14030	62223	STR	0*W(RLMTTY)
13265	61000	127*5	JP	CONTIN+2
13266	11000	00012	SET	CHANGE*TO*CHANGE+100
13267	24030	62226		
13270	10030	62226	ENT	0*W(CHANGE)
13271	22000	00001	MUL	1
13272	20600	00000	ADD	A*0*AP05
13273	14000	00000	CP	0
13274	27000	00024	SUB	0*200*0P05
13275	61000	127*5	JP	CONTIN+2
13276	10600	00024	ENT	0*200*AP05
13277	14000	00000	CP	0
13300	14030	62226	STR	0*W(CHANGE)
13301	61000	127*5	JP	CONTIN+2
13302	10000	00012	SET	CHANGE*TO*CHANGE-100
13303	35030	62226		
13304	61000	13270	JP	0TTD1B
13305	12000	00000	NO-OP	
13306	15030	13365	STR	A*W(ASTORE)
13307	11010	13305	ENT	A*L(0TTG1A1)
13310	15010	12677	STR	A*L(0TTY)
13311	11030	13365	ENT	A*W(ASTORE)
13312	61000	13006	JP	0TTG1
13313	12000	00000	NO-OP	
13314	15030	13365	STR	A*W(ASTORE)
13315	11010	13313	ENT	A*L(0TTP1B)
13316	15010	12677	STR	A*L(0TTY)
13317	11030	13365	ENT	A*W(ASTORE)
13320	61000	13036	JP	0TTP1
13321	12000	00000	NO-OP	
13322	15030	13365	STR	A*W(ASTORE)
13323	11010	13321	ENT	A*L(0TTT1C)
13324	15010	12677	STR	A*L(0TTY)
13325	11030	13365	ENT	A*W(ASTORE)
13326	61000	13062	JP	0TTT1
13327	12000	00000	NO-OP	
13330	15030	13365	STR	A*W(ASTORE)
13331	11010	13327	ENT	A*L(0TTT2D)
13332	15010	12677	STR	A*L(0TTY)
13333	11030	13365	ENT	A*W(ASTORE)
13334	61000	13111	JP	0TTT2
13335	12000	00000	NO-OP	
13336	15030	13365	STR	A*W(ASTORE)
13337	11010	13335	ENT	A*L(0TTA1E)
13340	15010	12677	STR	A*L(0TTY)
13341	11030	13365	ENT	A*W(ASTORE)
13342	61000	13140	JP	0TTA1
13343	12000	00000	NO-OP	
13344	15030	13365	STR	A*W(ASTORE)
13345	11010	13343	ENT	A*L(0TTS1F)
13346	15010	12677	STR	A*L(0TTY)
13347	11030	13365	ENT	A*W(ASTORE)

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13350	61000	13216		JP	GTTS1
13351	12000	00000	GTTS20	NO-OP	
13352	15030	13365		STR	A+W(ASTORE)
13353	11010	13361		ENT	A+L(GTTS20)
13354	15010	12677		STR	A+L(GTTY)
13355	11030	13365		ENT	A+W(ASTORE)
13356	61000	13263		JP	GTTS2
13357	12000	00000	GTTA2H	NO-OP	
13360	15030	13365		STR	A+W(ASTORE)
13361	11010	13357		ENT	A+L(GTTA2H)
13362	15010	12677		STR	A+L(GTTY)
13363	11030	13365		ENT	A+W(ASTORE)
13364	61000	13165		JP	GTTA2
13365	00000	00000	ASTORE	0	
13366	00000	00000	QSTORE	0	
13367	00000	00000	BSTORE	0	
13370	00000	00000	THD	0	
13371	00000	00000	KAT	0	
13372	00000	00000	THOLD	0	
13373	65000	13305	RESTAT	RJP	GTTS1A
13374	65000	13313	RESTAT1	RJP	GTTP1B
13375	65000	13321	RESTAT2	RJP	GTTP1C
13376	65000	13327	RESTAT3	RJP	GTTP2D
13377	65000	13335	RESTAT4	RJP	GTTP1E
13400	65000	13343	RESTAT5	RJP	GTTS1F
13401	65000	13351	RESTAT6	RJP	GTTS20
13402	65000	13357	RESTAT7	RJP	GTTA2H
13403	13371	13371	BUFFET	U-TAGKAT	KAT
13404	00000	00013	MACL	0	13
13405	00000	00030	KEX	0	30
13406	00000	00000		END-PROC	GTTY
13407	11530	62212	JUMPINTO	PROCEDURE	PROHISP
13410	61000	13416		ENT	A+W(HESET)+ANOT
13411	16030	62212		JP	J2
13412	16030	62253		STR	B0+W(RESET)
13413	16030	62254		STR	B0+W(THCTR1)
13414	16030	62255		STR	B0+W(THCTR1+1)
13415	16030	62172		STR	B0+W(THCTR1+2)
13416	12100	44475	J2	STR	B0+W(FORCE)
13417	16031	15024		ENT	B1+18749D
13420	72100	13417		STR	B0+W(LEV+B1)
13421	16030	62157		BJP	B1+J2+1
13422	16030	62156		STR	B0+W(SS8C)
13423	16030	62161		STR	B0+W(ETL)
13424	16030	62155		STR	B0+W(SSSS)
13425	10000	00002		STR	B0+W(TESTY)
13426	14030	62162		PUT	2+W(ICMSEC)
13427	12100	00035			
13430	16031	62263	PC5	ENT	B1+29D
13431	72100	13430		STR	B0+W(CFIVE+B1)
13432	11030	00160	J9	BJP	B1+PC5
13433	20000	00002		ENT	A+W(160)
13434	15030	62260		ADD	A+2
13435	11930	00160		STR	A+W(TCLOCK)
13436	20030	63407		ENT	A+W(160)
13437	15030	62261		ADD	A+60000D
13440	13130	63413		STR	A+W(INCLOCK)
				EX-COM	SAND=0+FORCE

INITIALIZE CFIVE

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13441	13130	15005		EX-COM	SAND*W(STEP1)*FORCE
13442	12200	00002		ENT	B2*2
13443	61000	13456		JP	P3
13444	12200	00002	PROJ	ENT	B2*2
13445	11430	62212		ENT	A*W(RESET)*AZERO
13446	61000	13407		JP	JUMPINTO
13447	11030	00160	P5	ENT	A*W(160)
13450	04630	62260		COM	A*W(TCLOCK)*YLESS
13451	61000	13447		JP	P5
13452	20000	00002		ADD	A*2
13453	15030	62260		STR	A*W(TCLOCK)
13454	11000	00002		ENT	A*2
13455	24030	62162		RPL	A+Y*W(1CMSEC)
13456	11030	00160	P3	ENT	A*W(160)
13457	21730	62261		SUB	A*W(INCLOCK)*ANE0
13460	61000	13652		JP	PHSEXT
13461	73270	14744		IN	SAMPLE*W(ADBF)
13462	13270	14754		EX-COM	SAMPLE*W(MAD)*FORCE
13463	70000	00006		RPT	6
13464	12000	00000		NO-OP	
13465	73270	15014		IN	SAMPLE*W(SPLED)
13466	13260	14745		EX-COM	SAMPLE*W(FLIP1)
13467	10030	62162		ENT	Q*W(1CMSEC)
13470	27700	00004		SUB	Q*4*QNEG
13471	65000	13601		RJP	PZZZ
13472	11430	62172	PROH	ENT	A*W(FORCE)*AZERO
13473	61000	13507		JP	GOMER
13474	16032	62253		STR	B0*W(THCTR1+B2)
13475	12500	00010		ENT	B5*8D
13476	61000	13635		JP	SETCFIVE
13477	10031	62263	PRH2	ENT	Q*W(CFIVE+B1)
13500	14036	62263		STR	Q*W(CFIVE+B6)
13501	27000	00001		SUB	Q*1
13502	27732	62177		SUB	Q*W(THAT+B2)*QNEG
13503	36032	62253		RPL	Y+1*W(THCTR1+B2)
13504	12101	00001		INCREMENT	B1*1
13505	12606	00001		INCREMENT	B6*1
13506	72500	13477		BJP	B5*PRH2
13507	10052	61523	GOMER	ENT	Q*W(SHTDTA+B2)
13510	11430	62172		ENT	A*W(FORCE)*AZERO
13511	61000	13515		JP	PRH41
13512	14036	62263		STR	Q*W(CFIVE+B6)
13513	27000	00001		SUB	Q*1
13514	27732	62177		SUB	Q*W(THAT+B2)*QNEG
13515	36032	62253	PRH41	RPL	Y+1*W(THCTR1+B2)
13516	11032	62253		ENT	A*W(THCTR1+B2)
13517	21700	00006		SUB	A*6*ANE0
13520	61000	13523		JP	PROM
13521	72200	13472		BJP	B2*PROH
13522	61000	13444		JP	PROJ
13523	11430	62155	PROM	ENT	A*W(TESTY)*AZERO
13524	61000	13577		JP	PRATT
13525	36030	62155		RPL	Y+1*W(TESTY)
13526	11030	62172		ENT	A*W(FORCE)
13527	15020	61646		STR	A*U(ID+2)
13530	13130	15006		EX-COM	SAND*W(STEP2)*FORCE
13531	65000	11212		UPITIME	
13532	10030	00160		ENT	Q*W(160)

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13533	26030	62214		ADD	Q*W(ICCYS)
13534	27030	62213		SUB	Q*W(LASTIME)
13535	22000	00764		MUL	764
13536	26000	00400		ADD	Q*400
13537	03000	00011		RSH	AQ*90
13540	14010	61651		STR	Q*L(ID+5)
13541	10030	62215		ENT	Q*W(ISEC)
13542	14020	61651		STR	Q*U(ID+5)
13543	10030	62216		ENT	Q*W(IMINUTE)
13544	14010	61650		STR	Q*L(ID+4)
13545	10030	62217		ENT	Q*W(1HOUR)
13546	14020	61650		STR	Q*U(ID+4)
13547	10030	62220		ENT	Q*W(1DAY)
13550	14010	61647		STR	Q*L(ID+3)
13551	10030	62221		ENT	Q*W(1MONTH)
13552	14020	61647		STR	Q*U(ID+3)
13553	11030	62160		ENT	A*W(MFLAG)
13554	15010	61707		STR	A*L(ID+350)
13555	11430	62172		ENT	A*W(FORCE)*AZERO
13556	61000	13570		JP	BOM
13557	11410	62174		ENT	A*L(INI)*AZERO
13560	61000	13574		JP	PIA
13561	16050	62174		STR	B0*CPL(INI)
13562	10030	00160		ENT	Q*W(160)
13563	27030	62213		SUB	Q*W(LASTIME)
13564	27000	74000		SUB	Q*307200
13565	01000	00012		RSH	Q*100
13566	14070	62173		STR	Q*CPW(CTSND5)
13567	61000	13574		JP	PIA
13570	10030	00160	BOM	ENT	Q*W(160)
13571	26000	11610		ADD	Q*50000
13572	16050	62174		STR	B0*CPL(INI)
13573	61000	13576		JP	PR4
13574	10030	00160	PIA	ENT	Q*W(160)
13575	26000	35230		ADD	Q*150000
13576	14030	62261	PR4	STR	Q*W(INCLOCK)
13577	72200	13472	PRATT	BJP	B2*PR0H
13600	61000	13444		JP	PR0J
13601	12000	00000	PZZZ	NO-OP	
13602	16030	62162		STR	B0*W(ICMSEC)
13603	36030	62157		RPL	Y+1*W(SSBC)
13604	12500	00011		ENT	B5*90
13605	11030	62156		ENT	A*W(ETL)
13606	20000	00011		ADD	A*90
13607	04700	44476		COM	A*187500*YMORE
13610	61000	13613		JP	PZZC
13611	12170	00000		ENT	B1*A
13612	61000	13615		JP	PZZD
13613	16030	62156	PZZC	STR	B0*W(ETL)
13614	12100	00011		ENT	B1*90
13615	11530	62161	PZZD	ENT	A*W(SSSS)*AN0T
13616	61000	13627		JP	PZZB
13617	10055	61523	PZZA	ENT	Q*LX(SHTDTA+8E)
13620	14011	15024		STR	Q*L(LEV+B1)
13621	72100	13622		INCREMENT	B1*-1
13622	72500	13617		BJP	B5*PZZA
13623	16030	62161		STR	B0*W(SSSS)
13624	11000	00012		ENT	A*100

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13625	24030	62156		RPL	A+Y*W(ETL)
13626	61010	13601		JP	L(PZZZ)
13627	10055	61523	PZZB	ENT	Q*IX(SHTDTA+B5)
13630	14021	15024		STR	Q*U(LEV+B1)
13631	72100	13632		INCREMENT	B1*-1
13632	72500	13627		BJP	B5*PZZB
13633	36030	62161		RPL	Y+1*W(SSSS)
13634	61010	13601		JP	L(PZZZ)
13635	11402	00000	SETCFIVE	ENT	A*B2*AZERO
13636	61000	13642		JP	SET2
13637	12100	00001		ENT	B1*1
13640	12600	00000		ENT	B6*0
13641	61000	13477		JP	PRH2
13642	21400	00001	SET2	SUB	A*1*AZERO
13643	61000	13647		JP	SET3
13644	12100	00013		ENT	B1*13
13645	12600	00012		ENT	B6*12
13646	61000	13477		JP	PRH2
13647	12100	00025	SET3	ENT	B1*25
13650	12600	00024		ENT	B6*24
13651	61000	13477		JP	PRH2
13652	11410	62174	PHSEXT	ENT	A*L(INI)*AZERO
13653	61000	13662		JP	PH6
13654	65000	11212		RJP	UPITIME
13655	16030	00160		STR	B0*W(160)
13656	16030	62162		STR	B0*W(ICMSEC)
13657	16030	62213		STR	B0*W(LASTIME)
13660	16030	62173		STR	B0*W(CTSND5)
13661	61000	13432		JP	J9
13662	16030	62156	PH6	STR	B0*W(ETL)
13663	36030	62225		RPL	Y+1*W(HOURCNTR)
13664	16030	62212		STR	B0*W(RESET)
13665	11030	62226		ENT	A*W(CHANGE)
13666	24030	62173		RPL	A+Y*W(CTSND5)
13667	16030	62226		STR	B0*W(CHANGE)
13670	13130	15007		EX-COM	SAND*W(STEP3)*FORCE
13671	11530	62155		ENT	A*W(TESTY)ANOT
13672	61000	13675		JP	CBJ
13673	16020	61646		STR	B0*U(ID+2)
13674	61000	13676		JP	CBK
13675	16060	61646	CBJ	STR	B0*CPU(ID+2)
13676	74370	15023	CBK	OUT	MAGGY*W(IDBUF)
13677	12130	62163		ENT	B1*W(MTN)
13700	13371	14750		EX-COM	MAGGY*W(MTCD+B1)*FORCE
13701	11530	62257	ZAP	ENT	A*W(TFLAG)*ANOT
13702	61000	13701		JP	ZAP
13703	16030	62257		STR	B0*W(TFLAG)
13704	11530	62160		ENT	A*W(MFLAG)*ANOT
13705	61000	13714		JP	FIVESEC
13706	21500	00001		SUB	A*1*ANOT
13707	61000	13712		JP	TENSEC
13710	74370	15021		OUT	MAGGY*W(MTBF15)
13711	61000	13715		JP	T00T
13712	74370	15017	TENSEC	OUT	MAGGY*W(MTBF10)
13713	61000	13715		JP	T0GT
13714	74370	15016	FIVESEC	OUT	MAGGY*W(MTBF5)
13715	12130	62163	T00T	ENT	B1*W(MTN)
13716	13771	14750		EX-COM	MAGGY*W(MTCD+B1)*FORCE

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13717 61010 13406

RETURN

13720 00000 00000

END-PROC PROHISP

PROCEDURE PTTY

COMMENT TYPES LATEST 60 VALUES OF

COMMENT TOTAL PROP LOSS AND SN RATIO

TYPETSCRSTOTAL PROPAGATION LOSS SN RATIO

13721 65000 10041

13722 76642 06441

13723 54006 06220

13724 60414 74164

13725 51205 60054

13726 20635 30000

13727 63560 06241

13730 64512 00100

13731 00007 70000

13732 65000 10041

TYPETSCR\$RANGE IN HUNDRED YARDS

13733 76624 15647

13734 45005 15600

13735 50655 64462

13736 45440 07141

13737 62446 30035

13740 00007 70000

13741 10030 61535

TYPE\$RANGE

13742 11000 00000

13743 65000 10306

13744 12100 00073

ENT B1*590

13745 10031 62565

PTTY2

PUT W(TPL+1600+P1)*W(TYPECELL1)

13746 14030 62322

13747 10031 63121

PUT W(SNRAT+1600+B1)*W(TYPECELL2)

13750 14030 62323

13751 16110 13762

STR B1*L(PTTY1)

13752 65000 10041

TYPETSCR\$

13753 76007 70000

13754 10030 62322

TYPE\$TYPECELL1*TYPECELL2

13755 11000 00003

13756 65000 10306

13757 10030 62323

13760 11000 00003

13761 65000 10306

13762 12100 00000

PTTY1

ENT B1*0

13763 72100 13745

BJP B1*PTTY2

13764 61010 13720

RETURN

13765 00000 00000

END-PROC PTTY

PROCEDURE POUTPUT

COMMENT FEEDS 3 FEET OF PAPER

13766 12100 00330

ENT B1*2160

13767 16110 13771

POUT4

STR B1*L(POUT3)

13770 65000 11200

LFANDCR

13771 12100 00000

POUT3

ENT B1*0

13772 72100 13767

BJP B1*POUT4

COMMENT GIVES SIDE BY SIDE LISTING OF

COMMENT TOTAL PROP LOSS AND S/N RATIO

COMMENT ON MONROE AT END OF HOUR

CLEAR240*PLAB

13773 70100 00030

13774 16030 63215

13775 12700 63215

FORM-TEXT PLAB*110*TOTAL PROPAGATION LOSS

13776 65000 10176

13777 00006 00002

14000 77777 77777

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14001	77000	00000	
14002	66036	62446	
14003	01525	40352	
14004	24322	46634	
14005	03500	14603	
14006	65650	10101	
14007	01010	10101	
14010	12700	63215	FORM-TEXT PLAB*550*S/N RATIO
14011	65000	10176	
14012	00003	00012	
14013	00000	00077	
14014	77777	77777	
14015	01010	10165	
14016	64500	15424	
14017	66340	30101	
14020	11000	63215	ENT A*PLAB
14021	65000	11011	MONROE
14022	70100	00030	CLEAR240*PLAB
14023	16030	63215	
14024	12700	63215	FORM-TEXT PLAB*250*RANGE
14025	65000	10176	
14026	00002	00004	
14027	00000	00077	
14030	77777	77777	
14031	01010	10154	
14032	24503	23001	
14033	10030	61535	FORM-DEC PLAB*310*RANGE
14034	12700	63223	
14035	11000	00000	
14036	65000	10466	
14037	11000	63215	ENT A*PLAB
14040	65000	11011	RJP MONROE
14041	70100	00030	CLEAR240*PLAB
14042	16030	63215	
14043	12700	63215	FORM-TEXT PLAB*250*MONTH
14044	65000	10176	
14045	00002	00004	
14046	00000	00077	
14047	77777	77777	
14050	01010	10147	
14051	03506	63301	
14052	10030	62221	FORM-DEC PLAB*310*IMONTH
14053	12700	63223	
14054	11000	00000	
14055	65000	10466	
14056	12700	63215	FORM-TEXT PLAB*370*DAY
14057	65000	10176	
14060	00002	00007	
14061	00777	77777	
14062	77770	00000	
14063	01272	47301	
14064	01010	10101	
14065	10030	62220	FORM-DEC PLAB*410*IDAY
14066	12700	63225	
14067	11000	00000	
14070	65000	10466	
14071	12700	63215	FORM-TEXT PLAB*460*HOUR
14072	65000	10176	

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14073	00002	00011	
14074	77777	77777	
14075	77000	00000	
14076	33036	75401	
14077	01010	10101	
14100	10030	62217	FORM-DEC PLAB*51D*IHOUR
14101	12700	63227	
14102	11000	00000	
14103	65000	10466	
14104	12700	63215	FORM-TEXT PLAB*54D*MINUTE
14105	65000	10176	
14106	00002	00012	
14107	00000	07777	
14110	77777	77700	
14111	01010	14734	
14112	50676	63001	
14113	10030	62216	FORM-DEC PLAB*61D*IMINUTE
14114	12700	63231	
14115	11000	00000	
14116	65000	10466	
14117	12700	63215	FORM-TEXT PLAB*64D*SECOND
14120	65000	10176	
14121	00002	00014	
14122	00000	07777	
14123	77777	77700	
14124	01010	16530	
14125	26035	02701	
14126	10030	62215	FORM-DEC PLAB*71D*ISEC
14127	12700	63233	
14130	11000	00000	
14131	65000	10466	
14132	11000	63215	ENT A*PLAB
14133	65000	11011	MONROE
14134	12100	00000	CL B1
14135	70100	00030	POUT1 CLEAR24D*PLAB
14136	16030	63215	
14137	10031	62325	PUT W(TPL+B1)*W(FORMCELL)
14140	14030	62324	
14141	10030	62324	FORM-DEC PLAB*1*FORMCELL
14142	12700	63215	
14143	11000	00003	
14144	65000	10466	
14145	10031	62326	PUT W(TPL+1*B1)*W(FORMCELL)
14146	14030	62324	
14147	10030	62324	FORM-DEC PLAB*21D*FORMCELL
14150	12700	63221	
14151	11000	00003	
14152	65000	10466	
14153	10031	62661	PUT W(SNRAT+B1)*W(FORMCELL)
14154	14030	62324	
14155	10030	62324	FORM-DEC PLAB*41D*FORMCELL
14156	12700	63225	
14157	11000	00003	
14160	65000	10466	
14161	10031	62662	PUT W(SNRAT+1*B1)*W(FORMCELL)
14162	14030	62324	
14163	10030	62324	FORM-DEC PLAB*61D*FORMCELL
14164	12700	63231	

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14165 11000 00003
14166 65000 10466
14167 11000 63215
14170 65000 11011
14171 12101 00001
14172 71100 00333
14173 61030 14135
14174 61010 13765

ENT A*PLAB
MONROE
ENT B1*1+B1
BSK B1*2190
JP POUT1

RETURN

14175 00000 00000

END-PROC POUTPUT
PROCEDURE RYTATABLE
COMMENT FILLS TABLES FOR PRINT
COMMENT OUT AT EMO OF HOUR

14176 10030 62225
14177 27000 00001
14200 22000 00012
14201 14010 00161
14202 12200 00000
14203 11032 61550
14204 10032 61562
14205 15031 62325
14206 14031 62661
14207 12101 00001
14210 71200 00011
14211 61000 14203
14212 61010 14175

RYTBL1

ENT Q*W(HOURCNTR)
SUB Q*1
MUL 100
STR Q*L(00161)
CL B2
ENT A*W(PROPL+B2)
ENT Q*W(SNTAB+B2)
STR A*W(TPL+B1)
STR Q*W(SNRAT+B1)
ENT B1*1+B1
BSK B2*90
JP RYTBL1

RETURN

END-PROC RYTATABLE

PROGRAM

14213 00000 00000
14214 10030 63246
14215 22000 01750
14216 23000 02000
14217 14030 62250
14220 10030 63247
14221 22000 01750
14222 34030 62250
14223 10030 63250
14224 22030 63407
14225 34030 62250
14226 10030 14241
14227 35030 62250
14230 12100 00000
14231 10031 63253
14232 14031 63246
14233 71100 00124
14234 61000 14231
14235 37630 63400
14236 16030 63400
14237 65000 12276
14240 61010 14213
14241 00000 00764

MYBANG

DELAYTIME

PROCEDURE RNGTVLTM
ENT Q*W(BANG)
MUL 10000
DIV 10240
STR Q*W(ALPHA)
ENT Q*W(BANG+1)
MUL 10000
RPL Y+Q*W(ALPHA)
ENT Q*W(BANG+2)
MUL 60000
RPL Y+Q*W(ALPHA)
ENT Q*W(DELAYTIME)
RPL Y-Q*W(ALPHA)
CL B1
ENT Q*W(BANG+5+B1)
STR Q*W(BANG+B1)
BSK B1*124
JP MYBANG
RPL Y-1*W(BANGTIME)*APOS
STR B0*W(BANGTIME)
RJP TVLTM RANGE

RETURN

IN A REGISTER ALSO

DELAY TIME IN MS

14242 00000 00000

END-PROC RNGTVLTM
PROCEDURE SHOTOFF
COMMENT PUTS SHOT TIME IN TABLE BANG
COMMENT ON INTERRUPT FROM BANG BOX

14243 16510 14266
14244 16610 14267
14245 15030 14273
14246 14030 14274

STR B5*L(SAVSHOTB5)
STR B6*L(SAVSHOTB6)
STR A*W(SAVSHOTA)
STR Q*W(SAVSHOTQ)

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14247	65000	11212		UPITIME	
14250	10030	62214		SET BANG(BANGTIME, ICLOCKCYS)*T0*ICCY5	
14251	12530	63400			
14252	70300	00005			
14253	12605	00000			
14254	14036	63246			
14255	10030	62215		SET BANG(BANGTIME, BSEC)*T0*ISEC	
14256	14036	63247			
14257	10030	62216		SET BANG(BANGTIME, BMIN)*T0*IMINUTE	
14260	14036	63250			
14261	10030	62217		SET BANG(BANGTIME, BHOUR)*T0*IHOUR	
14262	14036	63251			
14263	10030	62220		SET BANG(BANGTIME, BDAY)*T0*IDAY	
14264	14036	63252			
14265	36030	63400		SET BANGTIME*T0*BANGTIME+1	
14266	12500	00000	SAVSHOTB5	ENT B5*0	
14267	12600	00000	SAVSHOTB6	ENT B6*0	
14270	11030	14273		ENT A*W(SAVSHOTA)	
14271	10030	14274		ENT Q*W(SAVSHOTQ)	
14272	60110	14242		RETURN RIL	
14273	00000	00000	SAVSHOTA	0	
14274	00000	00000	SAVSHOTQ	0	
				END-PROC SHOTOFF	
14275	00000	00000		PROCEDURE EXECPI	
14276	66021	00000		SIL-EX ALL	
14277	11030	15010		ENT A*W(TELYCALL)	
14300	15030	00026		STR A*W(TTYINT)	SET UP TELETYPE INTERRUPT
14301	11030	15012		ENT A*W(SHOTCALL)	
14302	15030	00030		STR A*W(SHOTINT)	SET UP SHOT INTERRUPT CHANNEL
14303	11030	15011		ENT A*W(MAGCALL)	
14304	15030	00027		STR A*W(MAGINT)	SET UP MAG TAPE INTERRUPT
14305	66330	00000		RIL-EX TELY	
14306	66370	00000		RIL-EX MAGGY	
14307	66430	00000		RIL-EX SHOTCHAN	BANG BOX CHANNEL
14310	10000	03522		PUT 1874D*W(WORDS)	
14311	14030	62232			
14312	10000	00011		PUT 5D*W(ITEMS)	
14313	14030	62233			
14314	16030	62163		STR B0*W(MTN)	SET OUTFLAG FOR UNIT 1
14315	16030	62166		STR B0*W(LTAPE)	CLEAR LOW TAPE FLAG
14316	16030	62167		STR B0*W(PAR)	CLEAR PARITY ERROR FLAG
14317	16030	62224		STR B0*W(RWT4)	
14320	16030	62257		STR B0*W(TFLAG)	
14321	13370	14753		EX-COM MAGGY*W(MCMT)*FORCE	REQUEST CONTROL OF MT
14322	11530	62257	EXAAA	ENT A*W(TFLAG)*ANOT	
14323	61000	14322		JP EXAAA	WAIT FOR INTRRPT
14324	15050	62262		STR B0*CPL(CFLAG)	SET GTTY FOR PHASE 1A
14325	16030	63400		STR B0*W(BANGTIME)	
14326	73270	14744		IN SAMPLE*W(ADBF)	
14327	13260	14754		EX-COM SAMPLE*W(MAD)	MASTER CLEAR A/D
14330	16030	62164		STR B0*W(SHTCTR)	CLEAR SHOT COUNTER
14331	16030	62252		STR B0*W(SERISCNTR)	
14332	16030	62226		STR B0*W(CHANGE)	
14333	65000	10707		TAPESTAT	TEST TAPE STATUS
14334	11030	61535		ENT A*W(RANGE)	
14335	15030	61645		STR A*W(ID+1)	SET ESTIMATED RANGE IN ID
14336	70100	00132		CLEAR90D*BANG	
14337	16030	63246			

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14340	61100	14342	JP	EXABA*KEY1	
14341	65000	11263		TIMESYNC	
14342	16030	00160	EXABA	STR	B0*W(160)
14343	16030	62213		STR	B0*W(LASTIME)
14344	16030	62173		STR	B0*W(CTSND5)
14345	65000	12341		GNOISE	INPUT*MTN
14346	65000	10041		TYPETSCR5NOISE	SAMPLE TAKEN
14347	76562	05163			
14350	45006	34155			
14351	60544	50064			
14352	41534	55600			
14353	00007	70000			
14354	65000	10041		TYPETSCR5SET	ATTENUATORS FOR SIGNAL
14355	76634	56400			
14356	41646	44556			
14357	65416	42062			
14360	63004	62062			
14361	00635	14756			
14362	41547	70000			
14363	61300	14401	EXACA	JP	EXAA*KEY3
14364	11530	62212		ENT	A*W(RESET)*ANDT
14365	61000	14363		JP	EXACA
14366	65000	10041		TYPETSCR5RESET	TAKING ANOTHER NOISE SAMPLE
14367	76624	56345			
14370	64006	44153			
14371	51564	70041			
14372	56206	45045			
14373	62005	62051			
14374	63450	06341			
14375	55605	44500			
14376	00007	70000			
14377	61000	14342		JP	EXABA
14400	61000	14363		JP	EXACA
14401	16030	62222	EXAA	STR	B0*W(RLM)
14402	16030	62225	PINSERT2	STR	B0*W(HOURCNTR)
14403	16030	62223		STR	B0*W(RLMTTY)
14404	16030	63245		STR	B0*W(CYCLEFLAG)
14405	61100	14407		JP	EXAC*KEY1
14406	65000	11263			TIMESYNC
14407	16030	00160	EXAC	STR	B0*W(160)
14410	16030	62213		STR	B0*W(LASTIME)
14411	16030	62173		STR	B0*W(CTSND5)
14412	12000	00000		NO-OP	
14413	12000	00000		NO-OP	
14414	12200	00002		ENT	B2*2
14415	12100	00010		ENT	B1*10
14416	10032	62131	EXAB	ENT	G*W(GTHRESH+B2)
14417	14021	61644		STR	Q*U(ID+B1)
14420	11032	62034		ENT	A*W(NATT+B2)
14421	15011	61644		STR	A*L(ID+B1)
14422	72100	14423		INCREMENT	B1*-1
14423	72200	14416		BJP	B2*EXAB
14424	12000	00000		NO-OP	
14425	16030	62174		STR	B0*W(INI)
14426	11000	00026		ENT	A*220
14427	15030	62211		STR	A*W(REPRATE)
14430	12000	00000		NO-OP	
14431	16030	62155	EXAE	STR	B0*W(TESTY)

CLEAR GRAPH REQUESTS

KEYU SET IF EX CLOCK FAILS

SNYC INTERNAL TIMES TO EXTERNAL CLK

ZERO INTERNAL CLOCK

STORE NOISE THRESHOLD IN ID

NOISE ATTEN SETTINGS TO ID

NUMBER OF SHOTS PER HOUR

CLEAR DUD FLAG

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14432	16030	62172		STR	B0*W(FORCE)	
14433	11530	63245		ENT	A*W(CYCLEFLAG)*ANOT	WHICH SHOT
14434	61000	14441		JP	DEEPSHOT	
14435	11000	00264		ENT	A*1800	
14436	10000	00004		ENT	0*4	
14437	12100	00001		ENT	B1*1	
14440	61000	14444		JP	EXAEA	
14441	11000	00170	DEEPSHOT	ENT	A*1200	
14442	10000	00005		ENT	0*5	
14443	12100	00002		ENT	B1*2	
14444	15030	11261	EXAEA	STR	A*W(CYCLELENGTH)	TIME BETWEEN SHOTS
14445	14030	62210		STR	Q*W(CODEWORD)	SOURCE LEVEL
14446	16130	62207		STR	B1*W(DEPTH)	DEPTH CODE FOR SHOT
14447	11010	63243		ENT	A*L(CYCLEFLAG)	
14450	15050	63243		STR	A*CPL(CYCLEFLAG)	
14451	12100	00002		ENT	B1*2	
14452	16031	62253	EXAD	STR	B0*W(THCTRI+B1)	CLEAR THRESHOLD COUN ERS
14453	72100	14452		BJP	B1*EXAD	
14454	12100	00011		ENT	B1*90	
14455	12200	00000		ENT	B2*0	
14456	10032	62046	EXAG	ENT	Q*W(ATTEN+B2)	PUT
14457	14021	61644		STR	Q*U(10+B1)	SIGNAL
14460	12202	00001		ENT	B2*B2+1	ATTENUATOR
14461	10032	62046		ENT	Q*W(ATTEN+B2)	VALUES
14462	14011	61644		STR	Q*L(10+B1)	IN
14463	12202	00001		ENT	B2*B2+1	
14464	71100	00015		BSK	B1*130	
14465	61000	14456		JP	EXAG	RECORD
14466	16010	61707		STR	B0*L(10+350)	
14467	36030	62164		RPL	Y+1*W(SHTCTR)	
14470	15010	61644		STR	A*L(10)	CURRENT SHOT NUMBER
14471	11030	62207		ENT	A*W(DEPTH)	
14472	15010	61646		STR	A*L(10+2)	
14473	12100	00002		ENT	B1*2	
14474	11031	62046	EXAL	ENT	A*W(ATTEN+B1)	
14475	21631	62034		SUB	A*W(NATT+B1)*APOS	
14476	61000	14501		JP	EY	
14477	60400	14501		JP	EY*AZERO	
14500	61000	14504		JP	EZ1	
14501	10000	00001	EY	PUT	1*W(DUMP)	
14502	14030	62321				
14503	61000	14525		JP	EXAJ	
14504	21400	00001	EZ1	SUB	A*1*AZERO	
14505	61000	14511		JP	EZ2	
14506	10000	00012		PUT	100*W(DUMP)	
14507	14030	62321				
14510	61000	14525		JP	EXAJ	
14511	21400	00001	EZ2	SUB	A*1*AZERO	
14512	61000	14516		JP	EZ3	
14513	10000	00144		PUT	1000*W(DUMP)	
14514	14030	62321				
14515	61000	14525		JP	EXAJ	
14516	21400	00001	EZ3	SUB	A*1*AZERO	
14517	61000	14523		JP	EZ4	
14520	10000	01750		PUT	10000*W(DUMP)	
14521	14030	62321				
14522	61000	14525		JP	EXAJ	
14523	10000	23420	EZ4	PUT	100000*W(DUMP)	

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14524	14030	62321		CL	A	
14525	11000	00000	EXAJ	BSK	B0*W(GTHRESH+B1)	
14526	71031	62131		ENT	Q*W(GTHRESH+B1)*SKIP	
14527	10131	62131		ENT	Q*3*SKIP	
14530	10100	00003		DIV	W(DUMP)	
14531	23030	62321		STR	Q*W(THAT+B1)	
14532	14031	62177		BJP	B1*EXAL	
14533	72100	14474	EXAK	PROMISP		START SAMPLING
14534	65000	13406		STR	B0*W(CPHP)	
14535	16030	62175		JP	EXAM*MAG00	
14536	63340	14536	EXAM	RJP	TAPEWAIT	
14537	65000	14613		STR	B0*W(TFLAG)	
14540	16030	62257		OUT	MAGGY*W(IOBUF)	WRITE IO RECORD
14541	74370	15023		EX-COM	MAGGY*W(PMCB)*FORCE	ON UNIT 2
14542	13370	14777		ENT	A*W(TFLAG)*ANOT	
14543	11530	62257	EXAN	JP	EXAN	WAIT FOR INTERRUPT
14544	61000	14543		STR	B0*W(TFLAG)	
14545	16030	62257		ENT	B1*0	
14546	12100	00000	EXAQA	ENT	A*W(MTN)*AZERO	WHICH UNIT
14547	11430	62163		ENT	B1*2	SET FOR UNIT 3
14550	12100	00002		EX-COM	MAGGY*W(WEOF+B1)*FORCE	WRITE END FILE
14551	13371	15000		ENT	A*W(TFLAG)*ANOT	
14552	11530	62257	EXAO	JP	EXAO	
14553	61000	14552		STR	B0*W(TFLAG)	
14554	16030	62257		RNGTVLTM		CALCULATE RANGE AND TRAVEL TIME
14555	65000	14213		PHASEIN		MACDONALDS PROGRAMS
14556	65000	12271		OUT	MAGGY*W(PRODATAF)	WRITE PROCESSED DATA RECORD
14557	74370	15022		EX-COM	MAGGY*W(PMCB)*FORCE	
14560	13370	14777		ENT	A*W(TFLAG)*ANOT	
14561	11530	62257	EXAS	JP	EXAS	
14562	61000	14561		STR	B0*W(TFLAG)	
14563	16030	62257		EX-COM	MAGGY*W(WEOF+1)*FORCE	NED FILE
14564	13370	15001		ENT	A*W(TFLAG)*ANOT	
14565	11530	62257	EXAT	JP	EXAT	
14566	61000	14565		STR	B0*W(TFLAG)	
14567	16030	62257		RJP	RYTABLE	
14570	65000	14175		ENT	Q*W(SOA)	SPEED OF ADVANCE IN KNOTS
14571	10030	62176		MUL	200	CHANGE TO YARDS IN 100S
14572	22000	00024		MUL	W(CYCLENGTH)	TIME BETWEEN SHOTS IN SECONDS
14573	22030	11261		UPITIME		
14574	65000	11212		DIV	36000	CONVERT TO HOURS
14575	22000	07020		ADD	Q*W(RANGE)	
14576	26030	61535		STR	Q*W(ID+1)	SET ESTIMATED RANGE IN ID
14577	16030	61645		SUB	A*18000*ANE0	TEST REMAINDER
14600	10030	03		RPL	Y+1*W(ID+1)	ROUND OFF TO 100 YARDS
14601	65000	10707		TAPESTAT		CHECK TAPE STATUS
14602	36030	62252		RPL	Y+1*W(SERISCNTR)	UPDATE HOURLY SHOT COUNTER
14604	11030	62211	EXAWA	ENT	A*W(REPRATE)	
14605	21530	62252		SUB	A*W(SERISCNTR)*ANOT	ARE ALL HOURS SHOTS IN
14606	61000	14620		JP	EXBA	YES
14607	65000	11212	EXAW	UPITIME		UPDATE INTERNAL TIME AND CTSNDS
14610	11530	62175		ENT	A*W(CPHP)*ANOT	
14611	61000	14607		JP	EXAW	
14612	61000	14431		JP	EXAE	
14613	12000	00000	TAPEWAIT	NO-OP		
14614	12100	00371		ENT	B1*2490	DELAY UNTIL
14615	12000	00000	TAP	NO-OP		TAPE STOPS

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14616	72100	14615	BJP	B1*TAPWA	
14617	61010	14613	JP	L(TAPEWAIT)	
14620	16030	62257	EXBA	STR	B0*W(TFLAG)
14621	13370	15003		EX-COM	MAGGY*W(WEOF+3)*FORCE
14622	11530	62257	EXBAA	ENT	A*W(TFLAG)*ANOT
14623	61000	14622	JP	EXBAA	
14624	65000	10707		TAPESTAT	
14625	16030	62252		STR	B0*W(SERISCNTR)
14626	65000	11212		UPITIME	
14627	11030	00160		ENT	A*W(160)
14630	15030	62227		STR	A*W(LASHOTME)
14631	65000	10041		TYPETSCRSENO	OF HOURS RUN
14632	76455	64400			
14633	20460	05020			
14634	65626	30062			
14635	65567	70000			
14636	65000	10041		TYPETSCR\$TIMESCR\$DAY	
14637	76645	15545			
14640	76444	17100			
14641	00000	00077			
14642	65000	10167		TYPE-DEC	W(IDAY)
14643	00030	62220			
14644	65000	10041		TYPETSCR\$HOUR	
14645	76502	06562			
14646	00007	70000			
14647	65000	10167		TYPE-DEC	W(IMHOUR)
14650	00030	62217			
14651	65000	10041		TYPETSCR\$MINUTE	
14652	76555	15665			
14653	64450	00000			
14654	00007	70000			
14655	65000	10167		TYPE-DEC	W(IMINUTE)
14656	00030	62216			
14657	65000	10041		TYPETSCR\$SECOND	
14660	76634	54320			
14661	56440	00000			
14662	00007	70000			
14663	65000	10167		TYPE-DEC	W(ISEC)
14664	00030	62215			
14665	65000	10041		TYPETSCR\$SET ATTENUATORS FOR NOISE	
14666	76634	56400			
14667	41646	44556			
14670	65416	42062			
14671	63004	62062			
14672	00562	05163			
14673	45007	70000			
14674	61300	14676	EXBHB	JP	EXBHA*KEY3
14675	61000	14674		JP	EXBHB
14676	65000	12341	EXBHA	GNNOISE	INPUT*MTN
14677	65000	10041		TYPETSCR\$NOISE	SAMPLE TAKEN
14700	76562	05163			
14701	45006	34155			
14702	60544	50064			
14703	41534	55600			
14704	00007	70000			
14705	65000	10041		TYPETSCR\$SET ATTENUATORS FOR SIGNAL	
14706	76634	56400			
14707	41646	44556			

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14710 65416 42062
14711 63004 62062
14712 00635 14756
14713 41547 70000
14714 61300 14732
14715 11530 62212
14716 61000 14714
14717 65000 10041
14720 76024 56345
14721 64006 44153
14722 51564 70041
14723 56206 45045
14724 62005 62051
14725 63450 06341
14726 55605 44500
14727 00007 70000
14730 61000 14676
14731 61000 14714
14732 61200 14735
14733 65000 13765
14734 61000 14736
14735 65000 13720
14736 11030 62227
14737 20030 15013
14740 21730 00160
14741 61000 14736
14742 61000 14401
14743 61010 14275

14744 61522 61522
14745 00000 00140
14746 00000 00010
14747 00000 00003
14750 00000 53255
14751 00000 53257
14752 00000 53256
14753 00004 00000
14754 00000 00400
14755 00000 00015
14756 00000 00012
14757 00000 00111
14760 00000 00115
14761 00000 00120
14762 00000 00040
14763 00000 00103
14764 00000 00117
14765 00000 00116
14766 00000 00104
14767 00001 47255
14770 00001 47257
14771 00001 77255
14772 00001 77256
14773 00001 77257
14774 00001 77254
14775 00001 47256
14776 00001 46314
14777 00000 53256
15000 00000 73255

EXBHC

EXBH

EXBC
EXBG

ADBF
ADBF
FLIP1
FLIP2
FLIP3
MTCO

MCMT
MAU
MTI

RW1
RW3
RS1
RS2
RS3
RS4
RWCW2
RWCW4
PNCB
WEOF

JP EXBH*KEY3
ENT A*W(RESET)*ANOT
JP EXBHC
TYPETSCR\$RESET TAKING ANOTHER NOISE SAMPLE

JP EXBHA
JP EXBHC
JP EXBC*KEY2
RJP POUTPUT
JP EXBG
RJP PTTY
ENT A*W(LASHOTME)
ADD A*W(WAITIME)
SUB A*W(160)*ANE0
JP EXBG
JP EXAA
RETURN

PROGRAM
U-TAGGARBAGE*GARBAGE

140
10
3
53255
53257
53256
4 0
400
15
12
111
115
120
040
103
117
116
104

147255
147257
177255
177256
177257
177254
147256
146314
53256
73255

IS IT TIME TO START HOUR
START NEW HOURS RUN

DISABLE INPUT TTY
ENABLE PRINTER--TTY
WRITE ON TAPE UNIT 1
WRITE ON UNIT 3
WRITE ON UNIT 2
REQUEST CONTROL OF MAG TAPES
MASTER CLEAR A/D
CR
LF
I
M
P
SP
C
O
N
D
REWIND UNIT 1 NO WRITE
REWIND UNIT 3 NO WRITE
REQUEST STATUS UNIT 1
REQUEST STATUS UNIT 2
REQUEST STATUS UNIT3
REQUEST STATUS UNIT4
REWIND UNIT 2 NO WRITE
REWIND. DISABLE WRITE ON UNIT 4
EOF ON UNIT 1

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15001	00000	73256	73256
15002	00000	73257	73257
15003	00000	72314	72314
15004	00000	00243	243
15005	00000	00001	1
15006	00000	00002	2
15007	00000	00004	4
15010	65000	12677	TELYCALL RJP GTTY
15011	65000	10641	MAGCALL RJP PSTATUS
15012	65000	14242	SHOTCALL RJP SHOTOFF
15013	00013	20000	WAITIME 368640D
15014	61535	61522	SPLED U-TAGSHTOTA+10D*GARBAGE
15015	62165	62165	SPLE1 U-TAGTRST*TRST
15016	31175	15024	MTBF5 U-TAGLEV+62490*LEV
15017	45347	15024	MTBF10 U-TAGLEV+124990*LEV
15020	14766	14755	MTIC U-TAGMTI+90*MTI
15021	61521	15024	MTBF15 U-TAGLEV+187490*LEV
15022	61631	61535	PRODATABF U-TAGCALIN2+90*RANGE
15023	61714	61644	IDBUF U-TAGID+400*ID
		LEV	RESERVE 187500
		GARBAGE	RESERVE 1
		SHYDTA	RESERVE 100
		RANGE	RESERVE 1
		SIG	RESERVE 100
		PROPL	RESERVE 100
		SNTAB	RESERVE 100
		NOS	RESERVE 100
		PEAK	RESERVE 100
		CALIN2	RESERVE 100
		CALIN	EQUALS CALIN2
		CALPK	RESERVE 100
		ID	RESERVE 400
		AGSL	RESERVE 100
		SL178	RESERVE 100
		SLE1	RESERVE 100
		SLE2	RESERVE 100
		SLE3	RESERVE 100
		SLE4	RESERVE 100
		SLE5	RESERVE 100
		NAT	RESERVE 100
		NATT	RESERVE 100
		ATTEN	RESERVE 100
		SQIN	RESERVE 100
		CATT	RESERVE 100
		GSXI	RESERVE 100
		GSXIN	RESERVE 100
		GARBAGE2	RESERVE 1
		GTHRESH	RESERVE 100
		GID	RESERVE 5
		GNATT	RESERVE 5
		TESTY	RESERVE 1
		ETL	RESERVE 1
		SSBC	RESERVE 1
		MFLAG	RESERVE 1
		SSSS	RESERVE 1
		ICMSEC	RESERVE 1
		MTN	RESERVE 1
		SHTCTR	RESERVE 1

SANBORN STEPS

FOR TELETYPE INTR

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TRST	RESERVE	1
LTAPE	RESERVE	1
PAR	RESERVE	1
SA	RESERVE	1
SG	RESERVE	1
FORCE	RESERVE	1
CTSNDS	RESERVE	1
INI	RESERVE	1
CPHP	RESERVE	1
SOA	RESERVE	1
THAT	RESERVE	3
MONTH	RESERVE	1
DAY	RESERVE	1
HOURL	RESERVE	1
MIN	RESERVE	1
SEC	RESERVE	1
DEPTH	RESERVE	1
CODEWORD	RESERVE	1
REPHATE	RESERVE	1
RESET	RESERVE	1
LASTIME	RESERVE	1
ICCY5	RESERVE	1
ISEC	RESERVE	1
IMINUTE	RESERVE	1
IHOURL	RESERVE	1
IDAY	RESERVE	1
IMONTH	RESERVE	1
RLM	RESERVE	1
RLMTTY	RESERVE	1
RWT4	RESERVE	1
HOURLCNTR	RESERVE	1
CHANGE	RESERVE	1
LASHOTME	RESERVE	1
TESTIME	RESERVE	1
TMP	RESERVE	1
WORDS	RESERVE	1
ITEMS	RESERVE	1
TEMP	RESERVE	1
STRE	RESERVE	1
TEMP3	RESERVE	1
GSN	RESERVE	1
GTIMER	RESERVE	1
TEMPHOLD	RESERVE	1
FTEMP	RESERVE	1
BHOLD	RESERVE	1
SVB7	RESERVE	1
K	RESERVE	1
R	RESERVE	1
S	RESERVE	1
ALPHA	RESERVE	1
ZETA	RESERVE	1
SERISCNTR	RESERVE	1
THCTR1	RESERVE	3
STATWRD	RESERVE	1
TFLAG	RESERVE	1
TCLOCK	RESERVE	1
INCLOCK	RESERVE	1
CFLAG	RESERVE	1

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CPIVE	RESERVE	300
DUMP	RESERVE	1
GHIGH	EQUALS	LEV
GSLO	EQUALS	LEV+18750
TYPECELL1	RESERVE	1
TYPECELL2	RESERVE	1
FORMCELL	RESERVE	1
TPL	RESERVE	2200
SNRAT	RESERVE	2200
PLAB	RESERVE	240
CYCLEFLAG	RESERVE	1
DANG	RESERVE	900
DANGTIME	RESERVE	1
END-PROC	EXECPI	

APPENDIX C

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PHASE22			SYSTEM
			PROGRAM PARKA*14AUG68
			LOC-DD
			TABLESTORE*H*400*5
			END-TABLE STORE
			TABLESUMCL*H*150*5
			END-TABLE SUMCL
			TABLETOTAL*H*1*5
			END-TABLE TOTAL
			TABLESLAVG*H*1500*5
			END-TABLE SLAVG
			TABLEAVGES*H*1*5
			END-TABLE AVGES
			VRBL K*FXW
			VRBL R*FXW
			VRBL TEMP3*FXW
			VRBL S*FXW
			VRBL MIN5FLAG*FXW
			END-LOC-DD
12037	00000	00000	PROCEDURE SNRATIO2
12040	12200	00000	ENT B2*0
12041	11032	64564	PROC51 ENT A*W(NOS+B2)
12042	10032	64603	ENT Q*W(PEAK+B2)
12043	65000	14323	RJP SYNCORRECT
12044	14032	64455	STR Q*W(SIG1+B2)
12045	71200	00011	BSK B2*11
12046	61000	12041	JP PROC51
12047	61010	12037	RETURN
			END-PROC SNRATIO2
12050	00000	00000	PROCEDURE PROPLOSS2
12051	12200	00000	ENT B2*0
12052	12100	00000	ENT B1*0
12053	11030	70752	ENT A*W(CODEWORD)
12054	21500	00001	SUB A*1*ANOT
12055	61000	12071	JP PROP1A
12056	21500	00001	SUB A*1*ANOT
12057	61000	12101	JP PROP2A
12060	21500	00001	SUB A*1*ANOT
12061	61000	12111	JP PROP3A
12062	21500	00001	SUB A*1*ANOT
12063	61000	12121	JP PROP4A
12064	21500	00001	SUB A*1*ANOT
12065	61000	12131	JP PROP5A
12066	21500	00001	SUB A*1*ANOT

12067	61000	12141		JP	PROP6A
12070	61000	12151		JP	PROP7A
12071	10032	64730	PROP1A	ENT	Q*W(AGSL+B2)
12072	27031	64455		SUB	Q*W(SIG1+B1)
12073	14031	64474		STR	Q*W(PROPL2+B1)
12074	71200	00011		BSK	B2*11
12075	12000	00000		NO-OP	
12076	71130	70775		BSK	B1*W(ITEMS)
12077	61000	12071		JP	PROP1A
12100	61010	12050		RETURN	
12101	10032	64742	PROP2A	ENT	Q*W(SL178+B2)
12102	27031	64455		SUB	Q*W(SIG1+B1)
12103	14031	64474		STR	Q*W(PROPL2+B1)
12104	71200	00011		BSK	B2*11
12105	12000	00000		NO-OP	
12106	71130	70775		BSK	B1*W(ITEMS)
12107	61000	12101		JP	PROP2A
12110	61000	12100		RETURN	
12111	10032	64754	PROP3A	ENT	Q*W(SLE1+B2)
12112	27031	64455		SUB	Q*W(SIG1+B1)
12113	14031	64474		STR	Q*W(PROPL2+B1)
12114	71200	00011		BSK	B2*11
12115	12000	00000		NO-OP	
12116	71130	70775		BSK	B1*W(ITEMS)
12117	61000	12111		JP	PROP3A
12120	61000	12100		RETURN	
12121	10032	64766	PROP4A	ENT	Q*W(SLE2+B2)
12122	27031	64455		SUB	Q*W(SIG1+B1)
12123	14031	64474		STR	Q*W(PROPL2+B1)
12124	71200	00011		BSK	B2*11
12125	12000	00000		NO-OP	
12126	71130	70775		BSK	B1*W(ITEMS)
12127	61000	12121		JP	PROP4A
12130	61000	12100		RETURN	
12131	10032	65000	PROP5A	ENT	Q*W(SLE3+B2)
12132	27031	64455		SUB	Q*W(SIG1+B1)
12133	14031	64474		STR	Q*W(PROPL2+B1)
12134	71200	00011		BSK	B2*11
12135	12000	00000		NO-OP	
12136	71130	70775		BSK	B1*W(ITEMS)
12137	61000	12131		JP	PROP5A
12140	61000	12100		RETURN	
12141	10032	65012	PROP6A	ENT	Q*W(SLE4+B2)
12142	27031	64455		SUB	Q*W(SIG1+B1)
12143	14031	64474		STR	Q*W(PROPL2+B1)
12144	71200	00011		BSK	B2*11
12145	12000	00000		NO-OP	
12146	71130	70775		BSK	B1*W(ITEMS)
12147	61000	12141		JP	PROP6A
12150	61000	12100		RETURN	
12151	10032	65024	PROP7A	ENT	Q*W(SLE5+B2)
12152	27031	64455		SUB	Q*W(SIG1+B1)
12153	14031	64474		STR	Q*W(PROPL2+B1)
12154	71200	00011		BSK	B2*11
12155	12000	00000		NO-OP	
12156	71130	70775		BSK	B1*W(ITEMS)
12157	61000	12151		JP	PROP7A
12160	61000	12100		RETURN	

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			END-PROC PROPL0552
12161	00000	00000	PROCEDURE ATTENLOSS
12162	12100	00000	ENT B1*0
12163	10000	00001	ENT Q*1
12164	34030	64370	RPL Y+Q*W(NOP)
12165	10030	64350	ENT Q*W(RANGE)
12166	26030	64372	ADD Q*W(SUMR)
12167	14030	64372	STR Q**W(SUMR)
12170	10030	64350	ENT Q*W(RANGE)
12171	22030	64350	MUL W(RANGE)
12172	07000	00030	LSH AQ*30
12173	65000	11514	RJP FIXFLT
12174	11030	64371	ENT A*W(ASUMR2)
12175	10030	64513	ENT Q*W(QSUMR2)
12176	65000	10647	RJP FLAD
12177	65000	11412	RJP FLSTR
12200	15030	64371	STR A*W(ASUMR2)
12201	14030	64513	STR Q*W(QSUMR2)
12202	10030	64350	ENT Q**W(RANGE)
12203	05000	00014	LSH Q*120
12204	11000	00000	ENT A*0
12205	23000	00144	DIV 1000
12206	65000	14026	RJP CONLOGIT
12207	26000	00024	ADD Q*200
12210	14030	70776	STR Q*W(TEMP)
12211	10031	64526	CONV ENT Q*W(PROPL+B1)
12212	27030	70776	SUB Q*W(TEMP)
12213	22030	64350	MUL W(RANGE)
12214	07000	00030	LSH AQ*30
12215	65000	11514	RJP FIXFLT
12216	11031	65252	ENT A*W(ASUMRNW+B1)
12217	10031	65264	ENT Q*W(QSUMRNW+B1)
12220	65000	10647	RJP FLAD
12221	65000	11412	RJP FLSTR
12222	15031	65252	STR A*W(ASUMRNW+B1)
12223	14031	65264	STR Q*W(QSUMRNW+B1)
12224	71130	70775	BSK B1*W(ITEMS)
12225	61000	12211	JP CONV
12226	10031	64526	SECOND ENT Q*W(PROPL+B1)
12227	27030	70776	SUB Q*W(TEMP)
12230	26031	64443	ADD Q*W(NW+B1)
12231	14031	64443	STR Q*W(NW+B1)
12232	71130	70775	BSK B1*W(ITEMS)
12233	61000	12226	JP SECOND
12234	10031	64474	CONV1 ENT Q*W(PROPL2+B1)
12235	27030	70776	SUB Q*W(TEMP)
12236	22030	64350	MUL W(RANGE)
12237	07000	00030	LSH AQ*30
12240	65000	11514	RJP FIXFLT
12241	11031	65276	ENT A*W(ASUMRNW2+B1)
12242	10031	65310	ENT Q*W(QSUMRNW2+B1)
12243	65000	10647	RJP FLAD
12244	65000	11412	RJP FLSTR
12245	15031	65276	STR A*W(ASUMRNW2+B1)
12246	14031	65310	STR Q*W(QSUMRNW2+B1)
12247	71130	70775	BSK B1*W(ITEMS)
12250	61000	12234	JP CONV1
12251	10031	64474	TWICE ENT Q*W(PROPL2+B1)

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12252	27030	70776		SUB	Q*W(TEMP)
12253	26031	64431		ADD	Q*W(NW2+B1)
12254	14031	64431		STR	Q*W(NW2+B1)
12255	71130	70775		BSK	B1*W(ITEMS)
12256	61000	12251		JP	TWICE
12257	10030	64372	ALT0	ENT	Q*W(SUMR)
12260	22030	64372		MUL	W(SUMR)
12261	07000	00030		LSH	AQ*30
12262	65000	11514		RJP	FIXFLT
12263	65000	11412		RJP	FLSTR
12264	15030	65355		STR	A*W(ASUMR)
12265	14030	65354		STR	Q*W(QSUMR)
12266	11000	00000		ENT	A*0
12267	10030	64370		ENT	Q*W(NOP)
12270	07000	00036		LSH	AQ*36
12271	65000	11514		RJP	FIXFLT
12272	11030	64371		ENT	A*W(ASUMR2)
12273	10030	64513		ENT	Q*W(QSUMR2)
12274	65000	11170		RJP	FLMP
12275	11030	65355		ENT	A*W(ASUMR)
12276	10030	65354		ENT	Q*W(QSUMR)
12277	65000	11061		RJP	FLSB
12300	65000	11412		RJP	FLSTR
12301	15030	65352		STR	A*W(ADIVISOR)
12302	14030	65353		STR	Q*W(QDIVISOR)
12303	11000	00000		ENT	A*0
12304	10030	64370		ENT	Q*W(NOP)
12305	07000	00036		LSH	AQ*36
12306	65000	11514		RJP	FIXFLT
12307	65000	11412		RJP	FLSTR
12310	15030	65351		STR	A*W(ANOP)
12311	14030	65350		STR	Q*W(QNOP)
12312	10030	64372	ALT01	ENT	Q*W(SUMR)
12313	22031	64443		MUL	W(NW+B1)
12314	07000	00030		LSH	AQ*30
12315	65000	11514		RJP	FIXFLT
12316	65000	11412		RJP	FLSTR
12317	15030	65347		STR	A*W(ASUBT)
12320	14030	65346		STR	Q*W(QSUBT)
12321	10030	65350		ENT	Q*W(QNOP)
12322	11030	65351		ENT	A*W(ANOP)
12323	65000	10643		RJP	FLNT
12324	11031	65252		ENT	A*W(ASUMRNW+B1)
12325	10031	65264		ENT	Q*W(QSUMRNW+B1)
12326	65000	11170		RJP	FLMP
12327	11030	65347		ENT	A*W(ASUBT)
12330	10030	65346		ENT	Q*W(QSUBT)
12331	65000	11061		RJP	FLSB
12332	11030	65352		ENT	A*W(ADIVISOR)
12333	10030	65353		ENT	Q*W(QDIVISOR)
12334	65000	11276		RJP	FLDV
12335	65000	11657		RJP	FLTFIX
12336	03000	00017		RSH	AQ*17
12337	14031	64417		STR	Q*W(COEFF+B1)
12340	11000	00000		ENT	A*0
12341	10030	64372		ENT	Q*W(SUMR)
12342	07000	00033		LSH	AQ*33
12343	65000	11514		RJP	FIXFLT

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12344	11031	65252	ENT	A*W(ASUMRNW+B1)
12345	10031	65264	ENT	Q*W(QSUMRNW+B1)
12346	65000	11170	RJP	FLMP
12347	65000	11412	RJP	FLSTR
12350	14031	65334	STR	Q*W(QRRNW+B1)
12351	15031	65322	STR	A*W(ARRNW+B1)
12352	11000	00000	ENT	A*0
12353	10031	64443	ENT	Q*W(NW+B1)
12354	07000	00033	LSH	AQ*33
12355	65000	11514	RJP	FIXFLT
12356	10030	64513	ENT	Q*W(QSUMR2)
12357	11030	64371	ENT	A*W(ASUMR2)
12360	65000	11170	RJP	FLMP
12361	11031	65322	ENT	A*W(ARCNW+B1)
12362	10031	65334	ENT	Q*W(QRRNW+B1)
12363	65000	11061	RJP	FLSB
12364	11030	65352	ENT	A*W(ADIVISOR)
12365	10030	65353	ENT	Q*W(QDIVISOR)
12366	65000	11276	RJP	FLDV
12367	65000	11657	RJP	FLTFIX
12370	03000	00025	RSH	AQ*25
12371	14031	64373	STR	Q*W(INTERCEPT+B1)
12372	71130	70775	BSK	B1*W(ITEMS)
12373	61000	12312	JP	ALT01
12374	10030	64372	ALT02	ENT
12375	22031	64431	MUL	W(NW2+B1)
12376	07000	00030	LSH	AQ*30
12377	65000	11514	RJP	FIXFLT
12400	65000	11412	RJP	FLSTR
12401	15030	65347	STR	A*W(ASUBT)
12402	14030	65346	STR	Q*W(QSUBT)
12403	10031	65310	ENT	Q*W(QSUMRNW2+B1)
12404	11031	65276	ENT	A*W(ASUMRNW2+B1)
12405	65000	10643	RJP	FLENT
12406	10030	65350	ENT	Q*W(QNOP)
12407	11030	65351	ENT	A*W(ANOP)
12410	65000	11170	RJP	FLMP
12411	11030	65347	ENT	A*W(ASUBT)
12412	10030	65346	ENT	Q*W(QSUBT)
12413	65000	11061	RJP	FLSB
12414	11030	65352	ENT	A*W(ADIVISOR)
12415	10030	65353	ENT	Q*W(QDIVISOR)
12416	65000	11276	RJP	FLDV
12417	65000	11657	RJP	FLTFIX
12420	03000	00017	RSH	AQ*17
12421	14031	64514	STR	Q*W(COEFF2+B1)
12422	11000	00000	ENT	A*0
12423	10030	64372	ENT	Q*W(SUMR)
12424	07000	00033	LSH	AQ*33
12425	65000	11514	RJP	FIXFLT
12426	10031	65310	ENT	Q*W(QSUMRNW2+B1)
12427	11031	65276	ENT	A*W(ASUMRNW2+B1)
12430	65000	11170	RJP	FLMP
12431	65000	11412	RJP	FLSTR
12432	14031	65334	STR	Q*W(QRRNW+B1)
12433	15031	65322	STR	A*W(ARRNW+B1)
12434	11000	00000	ENT	A*0
12435	10031	64431	ENT	Q*W(NW2+B1)

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12436	07000	00033	LSH	AQ*33
12437	65000	11514	RJP	FIXFLT
12440	10030	64513	ENT	Q*W(QSUMR2)
12441	11030	64371	ENT	A*W(ASUMR2)
12442	65000	11170	RJP	FLMP
12443	11031	65322	ENT	A*W(ARRNW+B1)
12444	10031	65334	ENT	Q*W(GRRNW+B1)
12445	65000	11061	RJP	FLSB
12446	11030	65352	ENT	A*W(ADIVISOR)
12447	10030	65353	ENT	Q*W(QDIVISOR)
12450	65000	11276	RJP	FLOV
12451	65000	11657	RJP	FLTFIX
12452	03000	00025	RSH	AQ*25
12453	14031	64405	STR	Q*W(INTERCEPT2+B1)
12454	71130	70775	BSK	B1*W(ITEMS)
12455	61000	12374	JP	ALT02
12456	61010	12161	RETURN	
12457		00000	END-PROC	ATTENLOSS
12461		00000	PROCEDURE	POTTERPROP
12461	12200	00000	ENT	B1*0
12462	10030	71007	ENT	B2*0
63	22000	00005	ENT	Q*W(K)
12464	14030	00162	MUL	5
12465	10030	00162	STR	Q*W(00162)
12466	26010	00161	ENT	Q*W(00162)
12467	14030	00162	ADD	Q*L(00161)
12470	10031	65101	STR	Q*W(00162)
12471	27000	00001	ENT	Q*W(ATTEN+100+B1)
12472	22000	00240	SUB	Q*1
12473	14030	71000	MUL	240
12474	10032	65357	STR	Q*W(TEMP3)
12475	27031	64634	ENT	Q*W(SLAVG+B2)
12476	03000	00006	SUB	Q*W(CALIN2+100+B1)
12477	65000	14026	RSH	AQ*6
12500	26030	71000	RJP	CONLOGIT
12501	27031	64622	ADD	Q*W(TEMP3)
12502	11031	66742	SUB	Q*W(CALIN+B1)
12503	16130	70773	ENT	A*W(GSXIDB+B1)
12504	65000	14323	STR	B1*W(TMP)
12505	12130	70773	RJP	SNCORRECT
12506	11031	64742	ENT	B1*W(TMP)
12507	21000	00167	ENT	A*W(SL178+B1)
12510	33032	66747	SUB	A+167
12511	71100	00004	STR	A-Q*W(PROPL30+B2)
12512	61000	12465	BSK	B1*4
12513	11430	71437	JP	LUPPE1
12514	61000	12516	ENT	A*W(MIN5FLAG)*AZERO
12515	61010	12457	JP	LUPPE2
12516	10031	66735	RETURN	
12517	22000	00314	ENT	Q*W(AVGES+B1)
12520	03000	00006	MUL	314
12521	65000	14026	RSH	AQ*6
12522	26030	71000	RJP	CONLOGIT
12523	27031	64634	ADD	Q*W(TEMP3)
12524	11031	66742	SUB	Q*W(CALIN2+100+B1)
12525	16130	70773	ENT	A*W(GSXIDB+B1)
12526	65000	14323	STR	B1*W(TMP)
			RJP	SNCORRECT

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12527	12130	70773		ENT B1*W(TMP)
12530	11031	64742		ENT A*W(SL178+B1)
12531	27000	00166		SUB 0*166
12532	33031	70325		STR A-0*W(PROPL5+B1)
12533	71100	00004		BSK B1*4
12534	61000	12516		JP LUPPE2
12535	61000	12515		RETURN
				END-PROC POTTERPROP
12536	00000	00000		PROCEDURE PHASE2M
12537	65000	14177		RJP PKSGIN
12540	65000	14535		RJP SNRATIO
12541	65000	14574		RJP PROPLLOSS
12542	11030	70752		ENT A*W(CODEWORD)
12543	21400	00003		SUB A*3*AZERO
12544	61010	12536		RETURN
12545	65000	12037		RJP SNRATIO2
12546	65000	12050		RJP PROPLLOSS2
12547	65000	12161		RJP ATTENLOSS
12550	61000	12544		RETURN
				END-PROC PHASE2M
12551	00000	00000		PROCEDURE SLIDE
12552	16410	12655		
12553	16310	12654		
				LOC-INDEX J*L
12554	12400	00000	SLA	VARY J*THRU*13500*BY*1500
12555	61000	12557		
12556	12404	00226		
12557	11000	02506		
12560	21004	00000		
12561	60700	12566		
12562	11004	00000		IF R*EQ*J*THEN*GOTO*SLB
12563	21030	71010		
12564	60400	12567		
12565	61000	12556		END SLA
12566	61000	12575		GOTO SLC
12567	16030	71007	SLB	SET SLAVG*AND*AVGES*AND*S*AND*K*T0*0
12570	16030	71011		
12571	70100	00005		
12572	16030	66735		
12573	70100	01356		
12574	16030	65357		
12575	11000	00017	SLC	IF S*EQ*150*THEN*SET*S*T0*0
12576	21030	71011		
12577	60500	12601		
12600	16030	71011		
12601	12400	00000	LSA	VARY J*THRU*4
12602	12300	00000	LSB	VARY L*THRU*390
12603	70300	00005		SET STORE(J,L)*T0*(STORE(J,L))(STORE(J,L))(62)/10000
12604	12603	00000		
12605	16410	12606		
12606	12606	00000		
12607	10036	71463		
12610	22036	71463		
12611	22000	00062		
12612	03000	00014		
12613	14036	71463		
12614	71300	00047		END LSB
12615	61000	12603		

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12616	71400	00004		END LSA
12617	61000	12602		
12620	12400	00000	SLD	VARY J*THRU*4
12621	12530	71011		SET SUMCL(J,S)*T0*0
12622	70300	00005		
12623	12605	00000		
12624	16410	12625		
12625	12606	00000		
12626	16036	71773		
12627	12300	00000	SLE	VARY L*THRU*390
12630	70300	00005		SET SUMCL(J,S)*T0*SUMCL(J,S)+STORE(J,L)
12631	12603	00000		
12632	16410	12633		
12633	12606	00000		
12634	11036	71463		
12635	12530	71011		
12636	70300	00005		
12637	12605	00000		
12640	16410	12641		
12641	12606	00000		
12642	24036	71773		
12643	71300	00047	END SLE	
12644	61000	12630		
12645	71400	00004	END SLD	
12646	61000	12621		
12647	11000	00016		IF R*LT*140*THEN*SET*S*T0*S+1*THEN*RETURN
12650	21030	71010		
12651	60400	12657		
12652	60700	12657		
12653	36030	71011		
12654	12300	00000		
12655	12400	00000		
12656	61010	12551		
12657	12400	00000	SLF	VARY J*THRU*4
12660	16034	72106		SET TOTAL(J,0)*T0*0
12661	12300	00000	SLG	VARY L*THRU*140
12662	70300	00005		SET TOTAL(J,0)*T0*TOTAL(J,0)+SUMCL(J,L)
12663	12603	00000		
12664	16410	12665		
12665	12606	00000		
12666	11036	71773		
12667	24034	72106		
12670	71300	00016	END SLG	
12671	61000	12662		
12672	10034	72106		SET SLAVG(J,K)*T0*TOTAL(J,0)
12673	12530	71007		
12674	70300	00005		
12675	12605	00000		
12676	16410	12677		
12677	12606	00000		
12700	14036	65357		
12701	71400	00004	END SLF	
12702	61000	12660		
12703	16030	71437	CL	W(MIN5FLAG)
12704	11000	00225	IF	R*NOT*1490*THEN*GOTO*SLH
12705	21030	71010		
12706	60500	12736		
12707	12400	00000	SLJ	VARY J*THRU*4

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12710	12300	00000	SLK	VARY L*THRU*1350*BY*150
12711	61000	12713		
12712	12303	00017		
12713	11000	00207		
12714	21003	00000		
12715	60700	12725		
12716	70300	00005		SET AVGE5(J,0)*T0*AVGE5(J,0)+SLAVG(J,L)
12717	12603	00000		
12720	16410	12721		
12721	12606	00000		
12722	11036	65357		
12723	24034	66735		
12724	61000	12712		END SLK
12725	11034	66735		SET AVGE5(J,0)*T0*AVGE5(J,0)/100
12726	03000	00036		
12727	23000	00012		
12730	14034	66735		
12731	71400	00004		END SLJ
12732	61000	12710		
12733	10000	00001		SET MINSFLAG*T0*1
12734	14030	71937		
12735	61000	12750		GOTO SLN
12736	12400	00453	SLM	VARY J*FROM*2990*THRU*13490*BY*1500
12737	61000	12741		
12740	12404	00226		
12741	11000	02505		
12742	21004	00000		
12743	60700	12750		
12744	11030	71010		IF J*EQ*R*THEN*GOTO*SLI
12745	21004	00000		
12746	60400	12766		
12747	61000	12740		END SLH
12750	65000	12457	SLN	RJP POTTERPROP
12751	11030	71437		IF MINSFLAG*EQ*0*THEN*GOTO*SLT
12752	60400	12763		
12753	12700	00047		ENT B7*390
12754	10037	70333	SLP	ENT Q*W(PLVSRG5MIN+B7)
12755	14037	70340		STR Q*W(PLVSRG5MIN+B7+5)
12756	72700	12754		BJP B7*SLP
12757	12700	00004		ENT B7*4
12760	10037	70325	SLV	ENT Q*W(PROPL5+B7)
12761	14037	70333		STR Q*W(PLVSRG5MIN+B7)
12762	72700	12760		BJP B7*SLV
12763	36030	71011	SLT	SET S*T0*S+1
12764	36030	71007		SET K*T0*K+1
12765	61000	12654		RETURN
12766	12400	00000	SLI	VARY J*THRU*4
12767	12300	00016	SLM	VARY L*FROM*140*THRU*1490*BY*150
12770	61000	12772		
12771	12303	00017		
12772	11000	00225		
12773	21003	00000		
12774	60700	13004		
12775	70300	00005		SET AVGE5(J,0)*T0*AVGE5(J,0)+SLAVG(J,L)
12776	12603	00000		
12777	16410	13000		
13000	12606	00000		
13001	11036	65357		

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13002	24034	66735		
13003	61000	12771		END SLM
13004	11034	66735		SET AVGE5(J,0)*T0*AVGE5(J,0)/100
13005	03000	00036		
13006	23000	00012		
13007	14034	66735		
13010	71400	00004		END SLL
13011	61000	12767		
13012	10000	00001		SET MINSFLAG*T0*1
13013	14030	71437		
13014	61000	12750		GOTO SLN
				END-PROC SLIDE
13015	61000	00000	CW	JP 0
13016	13130	71423		EX-COM SAND*0*FORCE
13017	13130	17612		EX-COM SAND*W(STEP1)*FORCE
13020	12200	00000		ENT B2*0
13021	10032	65062	GDBB	ENT Q*W(NAT+100+B2)
13022	27000	00001		SUB Q*1
13023	22000	00240		MUL 240
13024	14032	65036		STR Q*W(NAT+B2)
13025	10032	65144	GDB	ENT Q*W(GSXI+100+B2)
13026	22000	00020		MUL 20
13027	03000	00006		RSH AQ*6
13030	65000	14026		RJP CONLOGIT
13031	26032	65036		ADD Q*W(NAT+B2)
13032	27032	64634		SUB Q*W(CALIN2+100+B2)
13033	14032	66742		STR Q*W(GSXI08+B2)
13034	71200	00004		BSK B2*4
13035	61000	13021		JP GOBB
13036	16030	71437		CL W(MINSFLAG)
13037	16030	71010		CL W(R)
13040	16030	71441	CW6	CL W(COUNT240)
13041	11030	00160	CW1	ENT A*W(160)
13042	20000	00063		ADD A*510
13043	15030	71442		STR A*W(TIMESTORE)
13044	12100	00000		ENT B1*0
13045	73270	17636		IN SAMPLE*W(CWBUFLIM)
13046	13261	13250	CW40	EX-COM SAMPLE*W(ADCODE+B1)
13047	70000	00004		RPT 4
13050	12000	00000		NO-OP
13051	71100	00004		BSK B1*4
13052	61000	13046		JP CW40
13053	10030	71441		ENT Q*W(COUNT240)
13054	22000	00005		MUL 5
13055	07000	00036		LSH AQ*300
13056	12170	00000		ENT B1*A
13057	12201	00004		ENT B2*4+B1
13060	12300	00000		ENT B3*0
13061	10053	70411	CW9	ENT Q*LX(CWINBUF+B3)
13062	14031	71463		STR Q*W(STORE+B1)
13063	12303	00001		ENT B3*1+B3
13064	22000	00001		MUL 1
13065	71102	00000		BSK B1*B2
13066	61000	13061		JP CW9
13067	36030	71441		RPL Y+1*W(COUNT240)
13070	21000	00050		SUB A*400
13071	60400	13076		JP CW12*AZERO
13072	11030	00160	CW13	ENT A*W(160)

START OF CW PERIOD
2-SECOND COUNTER
CLOCK
50 MILLISEC RATE

FIND LOCATION
IN TABLE STORE
A Q
STORE+B1 IS FIRST LOCATION
5 CELLS TO LOAD
FIRST WORD IS NOW IN FROM A/D

PUT IN TABLE
NEXT WORD
DELAY FOR A/D
ALL 5 WORDS IN
NO
IN A REGISTER
ARE 40 SAMPLES IN
YES
NO

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13073	21030	71442		SUB	A*W(TIMESTORE)	TIME TO SAMPLE AGAIN
13074	60700	13072		JP	CW13*ANEG	NO---WAIT
13075	61000	13041		JP	CW1	YES---DO IT
13076	11030	71010	CW12	ENT	A*W(R)	
13077	60500	13112		JP	CW15*ANOT	
13100	65000	13165		RJP	CW10	UPDATE TIME AND SET UP IO BUFFER
13101	16010	70416		STR	B0*L(CWID)	INDICATE RAW DATA
13102	16030	71021		STR	B0*W(TFLAG)	
13103	74370	17634		OUT	MAGGY*W(IOBUFFER)	WRITE IO
13104	12130	65242		ENT	B1*W(MTN)	WHICH UNIT
13105	13371	17555		EX-COM	MAGGY*W(MTCD+B1)*FORCE	
13106	11530	71021	CW16	ENT	A*W(TFLAG)*ANOT	
13107	61000	13106		JP	CW16	
13110	16030	71021		STR	B0*W(TFLAG)	
13111	65000	17364		RJP	TAPEWAIT	WAIT FOR TAPE TO STOP
13112	12700	00307	CW15	MOVE	2000*STORE*RAWOUTAREA	
13113	10037	71463				
13114	14037	70427				
13115	72700	13113				
13116	16030	71021		STR	B0*W(TFLAG)	
13117	74370	17633		OUT	MAGGY*W(RAWOUTBUF)	
13120	12130	65242		ENT	B1*W(MTN)	WHICH UNIT
13121	13371	17555		EX-COM	MAGGY*W(MTCD+B1)*FORCE	
13122	65000	12551		RJP	SLIDE	
13123	36030	71010		RPL	Y+1*W(R)	
13124	11030	71437		ENT	A*W(MINSFLAG)	END OF 5-MIN PERIOD
13125	60400	13154		JP	CW4*AZERO	NO---GO WAIT FOR END OF 50 MSEC
13126	11030	71010		ENT	A*W(R)	YES
13127	21000	00001		SUB	A*1	FIRST SUCH PERIOD
13130	60500	13145		JP	CW19*ANOT	NO
13131	11530	71021	CW30	ENT	A*W(TFLAG)*ANOT	
13132	61000	13131		JP	CW30	
13133	65000	17364		RJP	TAPEWAIT	
13134	36010	70416		RPL	Y+1*L(CWID)	INDICATE PROCESSED DATA IN IO
13135	16030	71021		STR	B0*W(TFLAG)	
13136	74370	17634		OUT	MAGGY*W(IOBUFFER)	WRITE IO
13137	13370	17557		EX-COM	MAGGY*W(MTCD+2)*FORCE	WRITE ON UNIT 2
13140	11530	71021	CW20	ENT	A*W(TFLAG)*ANOT	
13141	61000	13140		JP	CW20	
13142	16030	71021		STR	B0*W(TFLAG)	
13143	65000	17364		RJP	TAPEWAIT	WAIT FOR TAPE TO STOP
13144	61000	13151		JP	CW31	
13145	11530	71021	CW19	ENT	A*W(TFLAG)*ANOT	
13146	61000	13145		JP	CW19	
13147	65000	17364		RJP	TAPEWAIT	
13150	16030	71021		STR	B0*W(TFLAG)	
13151	74370	17632	CW31	OUT	MAGGY*W(PROCDBUF)*FORCE	WRITE PROCESSED DATA
13152	13370	17557		EX-COM	MAGGY*W(MTCD+2)*FORCE	ON UNIT 2
13153	61000	13161		JP	CW7	
13154	11030	00160	CW4	ENT	A*W(160)	
13155	21030	71442		SUB	A*W(TIMESTORE)	TIME TO SAMPLE AGAIN
13156	60700	13154		JP	CW4*ANEG	NO---WAIT
13157	65000	13323		RJP	TAPESTAT	
13160	61000	13040		JP	CW6	YES---GO DO IT
13161	11030	71010	CW7	ENT	A*W(R)	
13162	21000	02506		SUB	A*13500	END OF CW PERIOD
13163	60700	13154		JP	CW4*ANEG	NO---SAMPLE SOME MORE
13164	61000	13226		JP	CW18	YES---WRITE END OF FILE

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13165	61000	00000	CW10	JP 0	SETS UP ID BUFFER
13166	66431	00000		SIL-EX SHOTCHAN	
13167	65000	13626		RJP UPITIME	
13170	66430	00000		RIL-EX SHOTCHAN	
13171	11000	00002		ENT A*2	
13172	15020	70416		STR A*U(CWID)	INDICATE PHASE 2
13173	11030	70763		ENT A*W(1MONTH)	
13174	15020	70417		STR A*U(CWID+1)	
13175	11030	70762		ENT A*W(1DAY)	
13176	15010	70417		STR A*L(CWID+1)	
13177	11030	70761		ENT A*W(1HOUR)	
13200	15020	70420		STR A*U(CWID+2)	
13201	11030	70760		ENT A*W(1MINUTE)	
13202	15010	70420		STR A*L(CWID+2)	
13203	11030	70757		ENT A*W(1SEC)	
13204	15020	70421		STR A*U(CWID+3)	
13205	10030	00160		ENT Q*W(160)	
13206	26030	70756		ADD Q*W(1CCYS)	
13207	27030	70755		SUB Q*W(LASTIME)	
13210	22000	00764		MUL 764	
13211	26000	00400		ADD Q*400	
13212	03000	00011		RSH AQ*9D	
13213	14010	70421		STR Q*L(CWID+3)	MILLISECONDS
13214	12100	00012		ENT B1*100	
13215	12200	00004		ENT B2*4	
13216	11031	65050	CW11	ENT A*W(NATT+B1)	
13217	10031	65067		ENT Q*W(ATTEN+B1)	
13220	15022	70416		STR A*U(CWID+B2)	
13221	14012	70416		STR Q*L(CWID+B2)	
13222	12202	00001		ENT B2*1+B2	NEXT VALUE
13223	71100	00016		BSK B1*140	
13224	61000	13216		JP CW11	NO
13225	61000	13165		JP CW10	YES---RETURN
13226	11530	71021	CW18	ENT A*W(TFLAG)*ANOT	
13227	61000	13226		JP CW18	
13230	16030	71021		STR B0*W(TFLAG)	
13231	12100	00000		ENT B1*0	
13232	11410	65242		ENT A*L(MTN)*AZERO	
13233	12100	00002		ENT B1*2	UNIT 3
13234	13371	17605		EX-COM MAGGY*W(WEOF+B1)*FORCE	EOF ON RAW DATA UNT
13235	65000	17364		RJP TAPEWAIT	WAIT FOR TAPE TO STOP
13236	16030	71021		STR B0*W(TFLAG)	
13237	13370	17606		EX-COM MAGGY*W(WEOF+1)*FORCE	EOF ON PROCESSED DATA TAP
13240	11530	71021	CW21	ENT A*W(TFLAG)*ANOT	
13241	61000	13240		JP CW21	
13242	16030	71021		STR B0*W(TFLAG)	
13243	13130	17613		EX-COM SAND*W(STEP2)*FORCE	
13244	70000	00500		RPT 500	
13245	12000	00000		NO-OP	
13246	13130	17614		EX-COM SAND*W(STEP3)*FORCE	
13247	61000	13015		JP CW	CW PERIOD OVER---EXIT
13250	00000	00012	ADCODE	12	
13251	00000	00013		13	
13252	00000	00014		14	
13253	00000	00015		15	
13254	00000	00016		16	
PHASE11AA PROGRAM				PARKA*12AUG68	
PHASE11AA SYS-PROC				PARKA*12AUG68	

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LOC-DD

VRBL COUNT240*FXW
VRBL TIMESTORE*FXW
VRBL WAIT3MIN*FXW
VRBL TYPECELL1*FXW*3
VRBL TYPECELL2*FXW*3
VRBL FORMCELL*FXW*3
TABLECONST*H*1*10
FIELDATANC*FXWS*0*1*270
END-TABLE CONST
TABLEBANG*V*5*180
FIELDICLOCKCYS*FXWS*0*1
FIELDORSEC*FXWS*1*1
FIELDORMIN*FXWS*2*1
FIELDORHOUR*FXWS*3*1
FIELDORDAY*FXWS*4*1
END-TABLE BANG
VRBL BANGTIME*FXW
VRBL WHY*FXW
VRBL EXS*FXW
VRBL DENOM*FXW
VRBL ELGNA*FXW*270
VRBL RANGEIND*FXW
VRBL NUMDEN*FXW*270
VRBL SQNUMDEN*FXW*270
VRBL TEMPHOLD*FXW
VRBL CHANGE*FXW
VRBL TESTIME*FXW*120
VRBL LASHOTIME*FXW*120
VRBL SERISCNTR*FXW
VRBL MONTH*FXW
VRBL DAY*FXW
VRBL HOUR*FXW
VRBL MIN*FXW
VRBL SEC*FXW
VRBL TRST*FXW
VRBL LASTIME*FXW
VRBL ICCYS*FXW
VRBL ISEC*FXW
VRBL IMINUTE*FXW
VRBL IHOUR*FXW
VRBL IDAY*FXW
VRBL IMONTH*FXW
VRBL CTSNDS*FXW
VRBL RWT4*FXW
VRBL TESTY *FXW
VRBL ICMSEC *FXW
VRBL TH1 *FXW
VRBL MTN *FXW
VRBL SHTCTR *FXW
VRBL LTAPE *FXW
VRBL SA *FXW
VRBL SQ *FXW
VRBL PAR *FXW
VRBL LTU2 *FXW
VRBL FORCE *FXW
VRBL INI *FXW
VRBL CPHP *FXW

			VRBL SOA	*FXW
			VRBL THAT	*FXW
			VRBL MSEC	*FXW
			VRBL DEPTH	*FXW
			VRBL CODEWORD	*FXW
			VRBL REPRATE	*FXW
			VRBL HMK	*FXW
			VRBL RESET	*FXW
			VRBL TAP*FXW	
			VRBL WORDS*FXW	
			VRBL ITEMS*FXW	
			VRBL TEMP*FXW	
			VRBL HYDRO*FXW	
			VRBL STRE*FXW	
			VRBL TEMP3*FXW	
			VRBL RLM*FXW	
			VRBL RLMTTY*FXW	
			VRBL HOURCNTR*FXW	
			VRBL TEMPT*FXW	
			VRBL GSLO*FXW	
			VRBL SSBC*FXW	
			VRBL MFLAG*FXW	
			VRBL ETL*FXW	
			VRBL SSSS*FXW	
			VRBL GSN*FXW	
			VRBL GTIMER*FXW	
			VRBL FTEMP*FXW	
			VRBL BHOLD*FXW	
			VRBL CALIN2*FXW	
			VRBL ALPHA*FXW	
			VRBL SDVEL*FXW	
			VRBL THCTRI*FXW	
			VRBL ZETA*FXW	
			VRBL WAITIME*FXW	
			VRBL TFLAG*FXW	
			VRBL BEHOLD*FXW	
			VRBL RANGE*FXW	
			END-LOC-DD	
			PROCEDURE PSTATUS	
13255	00000	00000	STR A*W(SA)	
13256	15030	65247	STR Q*W(SQ)	
13257	14030	65250	STR B0*CPL(TFLAG)	
13260	16050	71021	TERM MAGGY*OUTPUT	
13261	67340	00000	TERM MAGGY*INPUT	
13262	66340	00000	STR MAGGY*W(STATWRD)	
13263	17370	71020	ENT Q*2	
13264	10000	00002	ENT A*2	
13265	11000	00002	COM MASK*W(STATWRD)*ANOT	
13266	43530	71020	JP STLT	
13267	61000	13305	LSH AQ*5	STLPE
13270	07000	00005	COM MASK*W(STATWRD)*ANOT	
13271	43530	71020	JP STPE	
13272	61000	13307	LSH AQ*1	STLAT
13273	07000	00001	COM MASK*W(STATWRD)*ANOT	
13274	43530	71020	JP STPE1	
13275	61000	13311	LSH AQ*7	STIC
13276	07000	00007	COM MASK*W(STATWRD)*ANOT	
13277	43530	71020	JP STTB	
13300	61000	13313		

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13301	11030	65247		ENT A*W(SA)
13302	10030	65250		ENT Q*W(SQ)
13303	60000	00000		RIL
13304	61010	13255		RETURN
13305	14030	65245	STLT	STR Q*W(LTAPE)
13306	61000	13270		JP STLPE
13307	14030	65246	STPE	STR Q*W(PAR)
13310	61000	13273		JP STLAT
13311	14030	65246	STPE1	STR Q*W(PAR)
13312	61000	13276		JP STIC
13313	63200	13317	SITB	JP SITB1*TELO
13314	74330	17626		OUT TELY*W(MTIC)
13315	13330	17553		EX-COM TELY*W(FLIP2)*FORCE
13316	13330	17554		EX-COM TELY*W(FLIP3)*FORCE
13317	11030	65247	SITB1	ENT A*W(SA)
13320	10030	65250		ENT Q*W(SQ)
13321	60000	00000		RIL
13322	61000	13304		RETURN
13323	00000	00000		END-PROC STATUS
13324	11530	65245		PROCEDURE TAPESTAT
13325	61010	13323		ENT A*W(LIAPE)*ANOT
13326	16030	65245		RETURN
13327	16030	71021		STR B0*W(LTAPE)
13330	13370	17576		STR B0*W(TFLAG)
13331	11530	71021	JA	EX-COM MAGGY*W(RS1)*FORCE
13332	61000	13331		ENT A*W(TFLAG)*ANOT
13333	16030	71021		JP JA
13334	11530	65245		STR B0*W(TFLAG)
13335	61000	13337		ENT A*W(LTAPE)*ANOT
13336	61000	13376		JP TIS2
13337	13370	17577	TIS2	JP RESETT
13340	11530	71021	JB	EX-COM MAGGY*W(RS2)*FORCE
13341	61000	13340		ENT A*W(TFLAG)*ANOT
13342	16030	71021		JP JB
13343	11530	65245		STR B0*W(TFLAG)
13344	61000	13346		ENT A*W(LTAPE)*ANOT
13345	61000	13366		JP TIS3
13346	13370	17600	TIS3	JP TRW2
13347	11530	71021	JC	EX-COM MAGGY*W(RS3)*FORCE
13350	61000	13347		ENT A*W(TFLAG)*ANOT
13351	16030	71021		JP JC
13352	11530	65245		STR B0*W(TFLAG)
13353	61000	13355		ENT A*W(LTAPE)*ANOT
13354	61000	13407		JP TIS4
13355	13370	17601	TIS4	JP RESESS
13356	11530	71021	JD	EX-COM MAGGY*W(RS4)*FORCE
13357	61000	13356		ENT A*W(TFLAG)*ANOT
13360	16030	71021		JP JD
13361	11530	65245		STR B0*W(TFLAG)
13362	61000	13325		ENT A*W(LTAPE)*ANOT
13363	36030	70766		RETURN
13364	16030	65245		RPL Y+1*W(RWT4)
13365	61000	13325		STR B0*W(LTAPE)
13366	12100	00001	TRW2	RETURN
13367	65000	13417		ENT B1*1
13370	13370	17602		RUP ENDFILEIT
13371	11530	71021	JE	EX-COM MAGGY*W(RWCW2)*FORCE
				ENT A*W(TFLAG)*ANOT

END OF FILE ON UNIT 2

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13372	61000	13371		JP	JE	
13373	16030	71021		STR	B0*W(TFLAG)	
13374	16030	65245		STR	B0*W(LTAPE)	
13375	61000	13346		JP	TIS3	
13376	36010	65242	RESETT	RPL	Y+1*L(MTN)	
13377	12100	00000		ENT	B1*0	
13400	65000	13417		RJP	ENDFILEIT	END OF FILE ON UNIT 1
13401	13370	17574		EX-COM	MAGGY*W(RW1)*FORCE	
13402	11530	71021	JG	ENT	A*W(TFLAG)*ANOT	
13403	61000	13402		JP	JG	
13404	16030	71021		STR	B0*W(TFLAG)	
13405	16030	65245		STR	B0*W(LTAPE)	
13406	61000	13337		JP	TIS2	
13407	16010	65242	RESESS	STR	B0*L(MTN)	
13410	12100	00002		ENT	B1*2	
13411	65000	13417		RJP	ENDFILEIT	END OF FILE ON UNIT 3
13412	13370	17575		EX-COM	MAGGY*W(RW3)*FORCE	
13413	11530	71021	JF	ENT	A*W(TFLAG)*ANOT	
13414	61000	13413		JP	JF	
13415	16030	65245		STR	B0*W(LTAPE)	
13416	61000	13355		JP	TIS4	
13417	12000	00000	ENDFILEIT	NO-OP		WRITES END OF FILE ON END OF TAPE
13420	13371	17605		EX-COM	MAGGY*W(*EOF+B1)*FORCE	
13421	11530	71021	EOFA	ENT	A*W(TFLAG)*ANOT	
13422	61000	13421		JP	EOFA	WAIT FOR TAPE INTERRUPT
13423	16030	71021		STR	B0*W(TFLAG)	
13424	61010	13417		JP	L(ENDFILEIT)	
13425	00000	00000		END-PROC	TAPESTAT	
13426	16110	13465		PROCEDURE	MONROE	
13427	16210	13466		STR	B1*L(STRB1)	
13430	16310	13467		STR	B2*L(STRB2)	
13431	16610	13470		STR	B3*L(STRB3)	
13432	16710	13471		STR	B6*L(STRB6A)	
13433	15010	13441		STR	B7*L(STRB7)	
13434	12600	00117		STR	A*L(MAB)	BUFFER ADDRESS IN A
13435	16036	13473		ENT	B6*79D	
13436	72600	13435	DDS	CL	W(HA+B6)	
13437	12300	00000		BJP	B6*DDS-1	
13440	12200	00000		ENT	B3*0	
13441	11000	00000	MAB	ENT	B2*0	
13442	20062	00000		ADD	A*B2	BUFFER ADDRESS +B2 IN A
13443	12770	00000		ENT	A*0	
13444	10037	00000		ENT	B7*A	
13445	12100	00000		ENT	Q*W(B7)	PICK UP BUFFER WORD
13446	11000	00000	MAA	ENT	B1*0	
13447	07000	00006		CL	A	
13450	15010	13452		LSH	A*6	
13451	21400	00001		STR	A*L(SPACETEST)	
13452	11000	00000	SPACETEST	SUB	A*1*AZERO	
13453	15033	13473		ENT	A*0	
13454	12303	00001		STR	A*W(HA+B3)	
13455	71100	00004		ENT	B3*B3+1	
13456	61000	13446		BSK	B1*4	
13457	71200	00017		JP	MAA	
13460	61000	13441		BSK	B2*15D	
13461	74170	13613		JP	MAA	
13462	12100	05670		OUT	MONRO*W(HBUF)	
				ENT	B1*3000D	

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13463	72100	13463	MAC	BJP B1*MAC	
13464	67140	00000		TERM MONRO*OUTPUT	
13465	12100	00000	STRB1	ENT B1*0	
13466	12200	00000	STRB2	ENT B2*0	
13467	12300	00000	STRB3	ENT B3*0	
13470	12600	00000	STRB6A	ENT B6*0	
13471	12700	00000	STRB7	ENT B7*0	
13472	61010	13425		RETURN	
			HA	RESERVE 800	
13613	13612	13473	HBUF	U-TAGHA+790*HA	
				END-PROC MONROE	
13614	00000	00000		PROCEDURE LFANDCR	
13615	10000	00075		PUT 75*W(PTCDE)	
13616	14030	13624			
13617	74170	13625		OUT MONRO*W(PTBUF)	
13620	12100	05670		ENT B1*30000	
13621	72100	13621	LALA	BJP B1*LALA	
13622	67140	00000		TERM MONRO*OUTPUT	
13623	61010	13614		RETURN	
13624	00000	00000	PTCDE	0	
13625	13624	13624	PTBUF	U-TAGPTCDE*PTCDE	
				END-PROC LFANDCR	
13626	00000	00000		PROCEDURE UPITIME	
				COMMENT UPDATES INTERNAL TIME FROM INTERNAL CLOCK	
13627	11030	70755		ENT A*W(LASTIME)	
13630	10030	00160		ENT Q*W(160)	
13631	14030	70755		STR Q*W(LASTIME)	
13632	27070	00000		SUB Q*A	
13633	34030	70756		RPL Y+Q*W(ICCYS)	ADD LAPSED CYCLES TO COUNT
13634	11030	70756	UPA	ENT A*W(ICCYS)	
13635	21600	02000		SUB A*10240*APOS	HAS ONE SECOND ELAPSED
13636	61000	13662		JP UPB	NO
13637	65000	13663		RJP SETCYCNT	SET CYCLE COUNT TO CURRENET TIME
13640	15030	70756		STR A*W(ICCYS)	
13641	36030	70757		RPL Y+1*W(ISEC)	UPDATE SECONDS
13642	21600	00074		SUB A*600*APOS	HAS ONE MINUTE ELAPSED
13643	61000	13634		JP UPA	NO
13644	15030	70757		STR A*W(ISEC)	
13645	36030	70760		RPL Y+1*W(IMINUTE)	UPDATE MINUTES
13646	21600	00074		SUB A*600*APOS	HAS ONE HOUR ELAPSED
13647	61000	13634		JP UPA	NO
13650	15030	70760		STR A*W(IMINUTE)	
13651	36030	70761		RPL Y+1*W(IHOUR)	UPDATE HOURS
13652	21600	00030		SUB A*240*APOS	HAS ONE DAY ELAPSED
13653	61000	13634		JP UPA	NO
13654	15030	70761		STR A*W(IHOUR)	
13655	36030	70762		RPL Y+1*W(IDAY)	UPDATE DAYS
13656	21600	00037		SUB A*310*APOS	HAS AUGUST TURNED TO SEPTEMBER
13657	61000	13634		JP UPA	NO
13660	36030	70763		RPL Y+1*W(IMONTH)	
13661	61000	13634		JP UPA	
13662	61010	13626	UPB	RETURN	
13663	12000	00000	SETCYCNT	NO-OP	
13664	15030	13676		STR A*W(KEEPA)	
13665	36030	65356		RPL Y+1*W(CTSNOS)	
13666	21730	13675		SUB A*W(CYCLENGTH)*ANEG	TEST FOR END OF SHOT CYCLE
13667	61000	13672		JP SCA	CYCLE HAS ENDED
13670	11030	13676	SCB	ENT A*W(KEEPA)	

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13671	61010	13663		JP	L(SETCYCNT)	
13672	16050	70410	SCA	STR	B0+CPL(CPHP)	SET NEW CYCLE FLAG
13673	16030	65356		STR	B0*W(CTSNDS)	
13674	61000	13670		JP	SCB	
13675	00000	00036	CYCLENGTH	300		
13676	00000	00000	KEEPA	0		
13677	00000	00000		END-PROC	UPITIME	
				PROCEDURE	TIMESYNC	
				COMMENT	SYNCS INTERNAL TIME TO EXTERNAL CLOCK	
13700	73070	14024		IN	EXCLOK*W(TRSTBC)	
13701	62040	13701	TSA	JP	TSA*EXPI	
13702	10000	00177		ENT	Q*177	SECONDS MASK
13703	40030	65244		ENT	LP*W(TRST)	
13704	15030	14025		STR	A*W(COMCELL)	
13705	73070	14024	TSC	IN	EXCLOK*W(TRSTBC)	
13706	62040	13706	TSC	JP	TSC*EXPI	
13707	40030	65244		ENT	LP*W(TRST)	
13710	21530	14025		SUB	A*W(COMCELL)*ANOT	TEST FOR SECONDS CHANGE
13711	61000	13705		JP	TSC	LOOP UNTIL SECONDS CHANGE
13712	10000	00017		ENT	Q*17	
13713	40030	65244		ENT	LP*W(TRST)	
13714	15030	70750		STR	A*W(SEC)	
13715	10000	00160		ENT	Q*160	
13716	40030	65244		ENT	LP*W(TRST)	
13717	03000	00042		RSH	AQ*34D	
13720	22000	00012		MUL	10D	
13721	34030	70750		RPL	Y+Q*W(SEC)	
13722	10000	03600		ENT	Q*3600	
13723	40030	65244		ENT	LP*W(TRST)	
13724	02000	00007		RSH	A*7	
13725	15030	70747		STR	A*W(MIN)	
13726	10000	34000		ENT	Q*34000	
13727	40030	65244		ENT	LP*W(TRST)	
13730	03000	00051		RSH	AQ*41D	
13731	22000	00012		MUL	10D	
13732	34030	70747		RPL	Y+Q*W(MIN)	
13733	10030	71424		ENT	Q*740000	
13734	40030	65244		ENT	LP*W(TRST)	
13735	02000	00016		RSH	A*14D	
13736	15030	70746		STR	A*W(HOUR)	
13737	10030	71425		ENT	Q*3000000	
13740	40030	65244		ENT	LP*W(TRST)	
13741	03000	00060		RSH	AQ*48D	
13742	22000	00012		MUL	10D	
13743	34030	70746		RPL	Y+Q*W(HOUR)	
13744	10030	71426		ENT	Q*74000000	
13745	40030	65244		ENT	LP*W(TRST)	
13746	03000	00062		RSH	AQ*50D	
13747	14030	70745		STR	Q*W(DAY)	
13750	10030	71427		ENT	Q*1700000000	
13751	40030	65244		ENT	LP*W(TRST)	
13752	03000	00066		RSH	AQ*54D	
13753	22000	00012		MUL	10D	
13754	34030	70745		RPL	Y+Q*W(DAY)	
13755	10030	71430		ENT	Q*6000000000	
13756	40030	65244		ENT	LP*W(TRST)	
13757	07000	00002		LSH	AQ*2	
13760	22000	00144		MUL	100D	

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13761	34030	70745	RPL	Y+G*W(DAY)	
13762	11000	00423	IF	DAY*GTEQ*2750*THEN*SET*MONTH*T0*10D*AND*DAY*T0*DAY-274D*THEN	
13763	21030	70745			
13764	01400	00000			
13765	60600	13773			
13766	10000	00012			
13767	14030	70744			
13770	10000	00422			
13771	35030	70745			
13772	61000	14010			
13773	11000	00365	IF	DAY*GTEQ*245D*THEN*SET*MONTH*T0*9D*AND*DAY*T0*DAY-244D*THEN*	
13774	21030	70745			
13775	01400	00000			
13776	60600	14004			
13777	10000	00011			
14000	14030	70744			
14001	10000	00364			
14002	35030	70745			
14003	61000	14010			
14004	10000	00010	SET	MONTH*T0*8D*AND*DAY*T0*DAY-213D	
14005	14030	70744			
14006	10000	00325			
14007	35030	70745			
14010	16030	70756	ZXCV	STR B0*W(ICCYS)	
14011	10030	70744		SET IMONTH*T0*MONTH	SET INTERNAL TIMES TO EX CLOCK
14012	14030	70763			
14013	10030	70745		SET IDAY*T0*DAY	
14014	14030	70762			
14015	10030	70746		SET IHOUR*T0*HOUR	
14016	14030	70761			
14017	10030	70747		SET IMINUTE*T0*MIN	
14020	14030	70760			
14021	10030	70750		SET ISEC*T0*SEC	
14022	14030	70757			
14023	61010	13677		RETURN	
14024	65244	65244	TRSTBC	U-TAGTRST*TRST	
14025	00000	00000	COMCELL	0	
14026	00000	00000		END-PROC TIMESYNC	
14027	14640	00000		PROCEDURE CONLOGIT	
14030	14000	00000		STR Q*A*AP0S	
14031	60400	14057		CP Q	
14032	12700	00001		JP CL4*AZERO	
14033	05000	00001	CL2	ENT B7*1	
14034	60300	14040		LSH Q*1	
14035	71700	00015		JP CL3*QNEG	
14036	61000	14033		BSK B7*13D	
14037	61000	14042		JP CL2	
14040	12707	77762	CL3	JP CL5	
14041	16750	00167		ENT B7*B7-13D	
14042	10047	77760	CL5	STR B7*CPL(00167)	
14043	14000	00000		ENT Q*X(B7-150)	
14044	02007	00000		CP Q	
14045	65000	14061	CL1	RSH A*B7	
14046	10000	00000		RJP NA LOG	
14047	03000	00036		CL Q	
14050	22030	71431		RSH AQ*30D	
14051	03000	00044		MUL 33626754	
				RSH AQ*36D	

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14052	22000	00012		MUL	12
14053	26200	00400		ADD	Q*400*AP05
14054	27000	01000		SUB	Q*1000
14055	01000	00011		RSH	Q*90
14056	61010	14026		RETURN	
14057	10040	77157	CL4	ENT	Q*X77157
14060	61010	14026		JP	L(CONLOGIT)
14061	61000	00000	NATLOG	JP	0
14062	14070	14157		STR	Q*CPW(KITTY)
14063	10000	00000		CL	Q
14064	11670	00000		ENT	A*A*AP05
14065	51040	77777		CP	A
14066	70000	00035		RPT	290
14067	06700	00001		LSH	A*1*ANEG
14070	61000	14136		JP	NAT2
14071	16710	14074		STR	B7*L(NAT1)
14072	06000	00030		LSH	A*240
14073	15030	14161		STR	A*W(KITTY+2)
14074	10040	00000	NAT1	ENT	Q*X(0)
14075	26030	14157		ADD	Q*W(KITTY)
14076	07700	00003		LSH	Q*3
14077	26000	00004		ADD	Q*4
14100	11000	00000		CL	A
14101	22030	14147		MUL	W(P00L)
14102	03000	00011		RSH	AQ*90
14103	11470	00000		ENT	A*A*AZERO
14104	61000	14144		JP	NAT4
14105	14030	14160	NAT5	STR	Q*W(KITTY+1)
14106	10030	14161		ENT	Q*W(KITTY+2)
14107	30030	14151		ENT	Y+Q*W(P00L3)
14110	15030	14162		STR	A*W(KITTY+3)
14111	30030	14153		ENT	Y+Q*W(P00L2)
14112	15030	14163		STR	A*W(KITTY+4)
14113	30030	14155		ENT	Y+Q*W(P00L1)
14114	15030	14164		STR	A*W(KITTY+5)
14115	10030	14152		ENT	Q*W(P00L3+1)
14116	11040	77777		ENT	A*X77777
14117	07000	00027		LSH	AQ*230
14120	23030	14162		DIV	W(KITTY+3)
14121	34030	14163		RPL	Y+Q*W(KITTY+4)
14122	10030	14154		ENT	Q*W(P00L2+1)
14123	11040	77777		ENT	A*X77777
14124	07000	00027		LSH	AQ*230
14125	23030	14163		DIV	W(KITTY+4)
14126	34030	14164		RPL	Y+Q*W(KITTY+5)
14127	10030	14156		ENT	Q*W(P00L1+1)
14130	11040	77777		ENT	A*X77777
14131	07000	00027		LSH	AQ*230
14132	23030	14164		DIV	W(KITTY+5)
14133	26030	14160		ADD	Q*W(KITTY+1)
14134	30030	14150		ENT	Y+Q*W(P00L+1)
14135	61000	14140		JP	NAT3
14136	10040	77157	NAT2	ENT	Q*X77157
14137	61010	14026		JP	L(CONLOGIT)
14140	15000	00000	NAT3	STR	A*Q
14141	36010	14061		RPL	Y+1*L(NATLOG)
14142	07000	00037		LSH	AQ*310
14143	61010	14061		JP	L(NATLOG)

14144	51440	77777	NAT4	SEL CP*X77777*AZERO
14145	61010	14061		JP L(NATL06)
14146	61000	14105		JP NAT5
14147	26134	41377	POOL	2613441377
14150	01656	40206		0165640206
14151	00154	63077	POOL3	0015463077
14152	77673	61257		7767361257
14153	01015	07044	POOL2	0101507044
14154	73737	47270		7373747270
14155	05141	14431	POOL1	0514114431
14156	56626	67151		5662667151
			KITTY	RESERVE 6
				END-PROC CONLOGIT
14165	00000	00000	CVT	PROCEDURE CONVOLT
14166	14030	70773		STR Q*W(TMP)
14167	10250	70773		ENT Q*LX(TMP)*QPOS
14170	14000	00000		CP Q
14171	22000	00024		MUL 24
14172	05000	00003		LSH Q*3
14173	11630	70773		ENT A*W(TMP)*APOS
14174	14000	00000		CP Q
14175	11000	00000		CL A
14176	61010	14165		RETURN
				END-PROC CONVOLT
14177	00000	00000	PK	PROCEDURE PKSQIN
14200	12100	00000		ENT B1*0
14201	12200	00000		ENT B2*0
14202	12300	00000		ENT B3*0
14203	11040	74000	START1	ENT A*X74000
14204	10002	00000		ENT Q*B2
14205	26001	00000		ADD Q*B1
14206	14030	00164		STR Q*W(00164)
14207	10064	17637		ENT Q*UX(LEV+B4)
14210	04370	00000		COM Q*A*YMORE
14211	14040	00000		STR Q*A
14212	10054	17637		ENT Q*LX(LEV+B4)
14213	04370	00000		COM Q*A*YMORE
14214	14040	00000		STR Q*A
14215	12202	00011		ENT B2*11+B2
14216	71130	70774		BSK B1*W(*ORDS)
14217	61000	14204		JP START1+1
14220	15033	64603		STR A*W(PEAK+B3)
14221	12203	00001		ENT B2*B3+1
14222	71330	70775		BSK B3*W(ITEMS)
14223	61000	14203		JP START1
14224	12100	00000		ENT B1*0
14225	12200	00000		ENT B2*0
14226	12300	00000		ENT B3*0
14227	10000	00000	START2	PUT Q*W(TEMP)
14230	14030	70776		
14231	16030	71421		STR B0*W(TEMPT)
14232	10002	00000		ENT Q*B2
14233	26001	00000		ADD Q*B1
14234	14030	00164		STR Q*W(00164)
14235	10064	17637		ENT Q*UX(LEV+B4)
14236	22064	17637		MUL UX(LEV+B4)
14237	65000	14314		RJP TILT
14240	10054	17637		ENT Q*LX(LEV+B4)

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14241	22054	17637		MUL	LX(LEV+B4)
14242	65060	14314		RJP	TILT
14243	12202	00011		ENT	B2*11+B2
14244	71130	70774		BSK	B1*W(WORDS)
14245	61060	14231		JP	START2+2
14246	10030	71421		ENT	Q*W(TEMP)
14247	01000	00011		RSH	Q*90
14250	34030	70776		RPL	Y+Q*W(TEMP)
14251	10030	70776		ENT	Q*W(TEMP)
14252	22000	00020		MUL	020
14253	03000	00014		RSH	AQ*120
14254	14030	70776		STR	Q*W(TEMP)
14255	10030	70776		PUT	W(TEMP)*W(SQIN+B3)
14256	14033	65106			
14257	12203	00001		ENT	B2*B3+1
14260	71330	70775		BSK	B3*W(ITEMS)
14261	61000	14227		JP	START2
14262	12100	00000		ENT	B1*0
14263	10030	00161	CONVERT	ENT	Q*W(00161)
14264	14030	00162		STR	Q*W(00162)
14265	10032	65067		ENT	Q*W(ATTEN+B2)
14266	27000	00001		SUB	Q*1
14267	22000	00240		MUL	240
14270	14031	65120		STR	Q*W(CATT+B1)
14271	71130	70775		BSK	B1*W(ITEMS)
14272	61000	14263		JP	CONVERT
14273	10031	64603	PEAK1	ENT	Q*W(PEAK+B1)
14274	65000	14165		CONVOLT	
14275	65000	14026		CONLOGIT	
14276	22000	00002		MUL	2
14277	26031	65120		ADD	Q*W(CATT+B1)
14300	27031	64641		SUB	Q*W(CALPK+B1)
14301	14031	64603		STR	Q*W(PEAK+B1)
14302	71130	70775		BSK	B1*W(ITEMS)
14303	61000	14273		JP	PEAK1
14304	10031	65106	SQIN1	ENT	Q*W(SQIN+B1)
14305	65000	14026		CONLOGIT	
14306	26031	65120		ADD	Q*W(CATT+B1)
14307	27031	64622		SUB	Q*W(CALIN+B1)
14310	14031	65106		STR	Q*W(SQIN+B1)
14311	71130	70775		BSK	B1*W(ITEMS)
14312	61000	14304		JP	SQIN1
14313	61010	14177		RETURN	
14314	12000	00000	TILT	NO-OP	
14315	22000	00620		MUL	620
14316	07000	00025		LSH	AQ*210
14317	24030	70776		RPL	A+Y*W(TEMP)
14320	05000	00011		LSH	Q*90
14321	34030	71421		RPL	Y+Q*W(TEMP)
14322	61010	14314		JP	L(TILT)
				END-PROC	PKSQIN
14323	00000	00000		PROCEDURE	SNCORRECT
14324	14030	70776		STR	Q*W(TEMP)
14325	12100	00000		ENT	B1*0
14326	10030	70776		ENT	Q*W(TEMP)
14327	27670	00000		SUB	Q*A*QPOS
14330	14000	00000		CP	Q
14331	31521	14345	TABL	ENT	Y-Q*U(SNCK+B1)*ANOT

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14332	61000	14340	JP	FIND1
14333	71100	00167	BSK	B1*1190
14334	61000	14331	JP	TABL
14335	10030	70776	ENT	Q*W(TEMP)
14336	11000	00000	CL	A
14337	61010	14323	RETURN	
14340	11011	14345	FIND1	ENT A*L(SNCK+B1)
14341	10030	70776	ENT	Q*W(TEMP)
14342	27070	00000	SUB	Q*A
14343	11000	00000	CL	A
14344	61000	14337	RETURN	
14345	00140	00000	SNCK	0014000000
14346	00137	00000		0013700000
14347	00136	00000		0013600000
14350	00135	00001		0013500001
14351	00134	00001		0013400001
14352	00134	00001		0013400001
14353	00133	00001		0013300001
14354	00132	00001		0013200001
14355	00131	00001		0013100001
14356	00130	00001		0013000001
14357	00130	00002		0013000002
14360	00127	00002		0012700002
14361	00126	00002		0012600002
14362	00125	00002		0012500002
14363	00124	00002		0012400002
14364	00124	00002		124 2
14365	00123	00003		123 3
14366	00122	00003		122 3
14367	00121	00003		121 3
14370	00120	00003		120 3
14371	00120	00003		120 3
14372	00117	00003		117 3
14373	00116	00004		116 4
14374	00115	00004		115 4
14375	00114	00004		114 4
14376	00113	00004		114 4
14377	00113	00004		113 4
14400	00112	00004		112 4
14401	00111	00004		111 4
14402	00110	00004		110 4
14403	00110	00004		110 4
14404	00107	00005		107 5
14405	00106	00005		106 5
14406	00105	00005		105 5
14407	00104	00005		104 5
14410	00104	00005		104 5
14411	00103	00006		103 6
14412	00102	00006		102 6
14413	00101	00006		101 6
14414	00100	00006		100 6
14415	00100	00007		100 7
14416	00077	00007		77 7
14417	00076	00007		76 7
14420	00075	00007		75 7
14421	00074	00010		74 10
14422	00074	00010		74 10
14423	00073	00010		73 10

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14424	00072	00010	72	10
14425	00071	00010	71	10
14426	00070	00010	70	10
14427	00070	00010	70	10
14430	00067	00011	67	11
14431	00066	00011	66	11
14432	00065	00011	65	11
14433	00064	00012	64	12
14434	00064	00012	64	12
14435	00063	00012	63	12
14436	00062	00013	62	13
14437	00061	00013	61	13
14440	00060	00013	60	13
14441	00060	00014	60	14
14442	00057	00014	57	14
14443	00056	00014	56	14
14444	00055	00014	55	14
14445	00054	00014	54	14
14446	00054	00014	54	14
14447	00053	00015	53	15
14450	00052	00015	52	15
14451	00051	00016	51	16
14452	00050	00016	50	16
14453	00050	00016	50	16
14454	00047	00017	47	17
14455	00046	00017	46	17
14456	00045	00020	45	20
14457	00044	00020	44	20
14460	00044	00020	44	20
14461	00043	00020	43	20
14462	00042	00020	42	20
14463	00041	00021	41	21
14464	00040	00021	40	21
14465	00040	00022	40	22
14466	00037	00022	37	22
14467	00036	00023	36	23
14470	00035	00023	35	23
14471	00034	00024	34	24
14472	00034	00024	34	24
14473	00033	00024	33	24
14474	00032	00025	32	25
14475	00031	00026	31	26
14476	00030	00027	30	27
14477	00030	00030	30	30
14500	00027	00030	27	30
14501	00026	00030	26	30
14502	00025	00031	25	31
14503	00024	00032	24	32
14504	00024	00033	24	33
14505	00023	00034	23	34
14506	00022	00034	22	34
14507	00021	00036	21	36
14510	00020	00037	20	37
14511	00020	00040	20	40
14512	00017	00041	17	41
14513	00016	00042	16	42
14514	00015	00044	15	44
14515	00014	00045	14	45

14516	00014	00047	14	47
14517	00013	00051	13	51
14520	00012	00054	12	54
14521	00011	00056	11	56
14522	00010	00061	10	61
14523	00010	00064	10	64
14524	00007	00070	7	70
14525	00006	00074	6	74
14526	00005	00102	5	102
14527	00004	00110	4	110
14530	00004	00117	4	117
14531	00003	00120	3	120
14532	00002	00120	2	120
14533	00001	00120	1	120
14534	00000	00120	0	120
				END-PROC SNCORRECT
14535	00000	00000	PROCEDURE SNRATIO	
14536	12100	00000	ENT B1*0	
14537	10030	00161	AGAIN	ENT Q*W(00161)
14540	14030	00162		STR Q*W(00162)
14541	10032	65050		ENT Q*W(NATT+B2)
14542	27000	00001		SUB Q*1
14543	22000	00240		MUL 240
14544	14031	65036		STR Q*W(NAT+B1)
14545	71130	70775		BSK B1*W(ITEMS)
14546	61000	14537		JP AGAIN
14547	10031	65132	PROCS	ENT Q*W(GSXI+B1)
14550	22000	00010		MUL 10
14551	03000	00006		RSH AQ*6
14552	16130	70777		STR B1*W(STRE)
14553	65000	14026		CONLOGIT
14554	12130	70777		ENT B1*W(STRE)
14555	26031	65036	GCI	ADD Q*W(NAT+B1)
14556	27031	64622		SUB Q*W(CALIN2+B1)
14557	14031	64564		STR Q*W(NOS+B1)
14560	14030	71000		STR Q*W(TEMP3)
14561	14040	00000		STR Q*A
14562	10031	65106		ENT Q*W(SQIN+B1)
14563	16130	70777		STR B1*W(STRE)
14564	65000	14323		SNCORRECT
14565	12130	70777		ENT R1*W(STRE)
14566	14031	64351		STR Q*W(SIG+B1)
14567	27030	71000		SUB Q*W(TEMP3)
14570	14031	64545	SNGT	STR Q*W(SNTAB+B1)
14571	71130	70775		BSK B1*W(ITEMS)
14572	61000	14547		JP PROCS
14573	61010	14535		RETURN
				END-PROC SNRATIO
14574	00000	00000	PROCEDURE PROPLLOSS	
14575	12200	00000	ENT B2*0	
14576	12100	00000	ENT B1*0	
14577	11030	70752	ENT A*W(CODEWORD)	
14600	21500	00001	SUB A*1*ANOT	
14601	61000	14615	JP PROP1	
14602	21500	00001	SUB A*1*ANOT	
14603	61000	14625	JP PROP2	
14604	21500	00001	SUB A*1*ANOT	
14605	61000	14635	JP PROP3	

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14606	21500	00001		SUB	A*1*ANOT
14607	61000	14645		JP	PROP4
14610	21500	00001		SUB	A*1*ANOT
14611	61000	14655		JP	PROP5
14612	21500	00001		SUB	A*1*ANOT
14613	61000	14665		JP	PROP6
14614	61000	14675		JP	PROP7
14615	10032	64730	PROP1	ENT	Q*W(SIG+B2)
14616	27031	64351		SUB	Q*W(SIG+B1)
14617	14031	64526		STR	Q*W(PROPL+B1)
14620	71200	00011		BSK	B2*11
14621	12000	00000		NO-OP	
14622	71130	70775		BSK	B1*W(ITEMS)
14623	61000	14615		JP	PROP1
14624	61010	14574		RETURN	
14625	10032	64742	PROP2	ENT	Q*W(SLE1+B2)
14626	27031	64351		SUB	Q*W(SIG+B1)
14627	14031	64526		STR	Q*W(PROPL+B1)
14630	71200	00011		BSK	B2*11
14631	12000	00000		NO-OP	
14632	71130	70775		BSK	B1*W(ITEMS)
14633	61000	14625		JP	PROP2
14634	61000	14624		RETURN	
14635	10032	64754	PROP3	ENT	Q*W(SLE1+B2)
14636	27031	64351		SUB	Q*W(SIG+B1)
14637	14031	64526		STR	Q*W(PROPL+B1)
14640	71200	00011		BSK	B2*11
14641	12000	00000		NO-OP	
14642	71130	70775		BSK	B1*W(ITEMS)
14643	61000	14635		JP	PROP3
14644	61000	14624		RETURN	
14645	10032	64766	PROP4	ENT	Q*W(SLE2+B2)
14646	27031	64351		SUB	Q*W(SIG+B1)
14647	14031	64526		STR	Q*W(PROPL+B1)
14650	71200	00011		BSK	B2*11
14651	12000	00000		NO-OP	
14652	71130	70775		BSK	B1*W(ITEMS)
14653	61000	14645		JP	PROP4
14654	61000	14624		RETURN	
14655	10032	65000	PROP5	ENT	Q*W(SLE3+B2)
14656	27031	64351		SUB	Q*W(SIG+B1)
14657	14031	64526		STR	Q*W(PROPL+B1)
14660	71200	00011		BSK	B2*11
14661	12000	00000		NO-OP	
14662	71130	70775		BSK	B1*W(ITEMS)
14663	61000	14655		JP	PROP5
14664	61000	14624		RETURN	
14665	10032	65012	PROP6	ENT	Q*W(SLE4+B2)
14666	27031	64351		SUB	Q*W(SIG+B1)
14667	14031	64526		STR	Q*W(PROPL+B1)
14670	71200	00011		BSK	B2*11
14671	12000	00000		NO-OP	
14672	71130	70775		BSK	B1*W(ITEMS)
14673	61000	14665		JP	PROP6
14674	61000	14624		RETURN	
14675	10032	65024	PROP7	ENT	Q*W(SLE5+B2)
14676	27031	64351		SUB	Q*W(SIG+B1)
14677	14031	64526		STR	Q*W(PROPL+B1)

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14700	71200	00011	BSK B2*11
14701	12000	00000	NO-OP
14702	71130	70775	BSK B1*W(ITEMS)
14703	61000	14675	JP PROP7
14704	61000	14624	RETURN
14705	00000	00000	END-PROC PROPLLOSS
14706	65000	14177	PROCEDURE PHASE1M
14707	65000	14535	PKSQIN
14710	65000	14574	SNRATIO
14711	61010	14705	PROPLLOSS
			RETURN
14712	00000	00000	END-PROC PHASE1M
14713	10010	64665	PROCEDURE TVLTM RANGE
14714	14030	71013	ENT Q*L(ID+5)
14715	10020	64665	STR Q*W(ZETA)
14716	22000	01750	ENT Q*U(ID+5) SECONDS
14717	34030	71013	MUL 10000
14720	10010	64664	RPL Y+Q*W(ZETA)
14721	22030	71432	ENT Q*L(ID+4) MINUTES
14722	34030	71013	MUL 600000
14723	10030	71012	RPL Y+Q*W(ZETA) ZETA IS RECEIVED TIME IN MILLISECON
14724	35030	71013	SET ZETA*TO*ZETA-ALPHA
14725	11030	71013	TTE IF ZETA*LT*0*THEN*SET*ZETA*TO*ZETA+36000000*THEN*GOTO*TTE
14726	60600	14732	
14727	11030	71433	
14730	24030	71013	
14731	61000	14725	
14732	11030	71013	SET RANGE*TO*ZETA+5/100
14733	20000	00005	
14734	03000	00036	
14735	23000	00012	
14736	14030	64350	
14737	22030	17611	SET RANGE*TO*(RANGE)(SDVEL)+5000/10000
14740	30000	00764	
14741	03000	00036	
14742	23000	01750	
14743	14030	64350	
14744	61010	14712	RETURN
14745	00000	00000	END-PROC TVLTM RANGE
14746	73270	17550	PROCEDURE GIN
14747	13260	15226	IN SAMPLE*W(ADBF)
14750	70000	00006	EX-COM SAMPLE*W(GADEF1)
14751	12000	00000	RPT 6
14752	73270	15225	NO-OP
14753	13260	15227	IN SAMPLE*W(GBUFIN)
14754	61010	14745	EX-COM SAMPLE*W(GADEF2)
			RETURN
14755	00000	00000	END-PROC GIN
14756	13130	71423	PROCEDURE GNOISE*INPUT*MTN
14757	13130	17612	EX-COM SAND*0*FORCE
14760	12100	00000	EX-COM SAND*W(STEP1)*FORCE
14761	12200	00000	ENT B1*0
14762	16031	65132	ENT B2*0
14763	71100	00016	STR B0*W(GSXI+B1)
14764	61000	14762	BSK B1*140
14765	10030	15232	JP GCLR
			PUT W(GMTEF3)*W(GMTEF2)

14766	14030	15231		
14767	10030	15234		PUT W(GMTEF5)*W(GMTEF4)
14770	14030	15233		
14771	10030	15236		PUT W(GMTEF7)*W(GMTEF6)
14772	14030	15235		
14773	10030	15240		PUT W(GMTEF9)*W(GMTEF8)
14774	14030	15237		
14775	10000	00002		ENT 0*2
14776	22010	65242		MUL L(MTN)
14777	26000	00001		ADD 0*1
15000	34030	15231		RPL Y+Q*W(GMTEF2)
15001	34030	15233		RPL Y+Q*W(GMTEF4)
15002	34030	15235		RPL Y+Q*W(GMTEF6)
15003	34030	15237		RPL Y+Q*W(GMTEF8)
15004	11530	70754		ENT A*W(RESET)*ANOT
15005	61000	15023		JP GTEDDI
15006	16030	70754		STR B0*W(RESET)
15007	16030	71021		STR B0*W(TFLAG)
15010	13370	15235		EX-COM MAGGY*W(GMTEF6)*FORCE
15011	11530	71021	GMIN	ENT A*W(TFLAG)*ANOT
15012	61000	15011		JP GMIN
15013	16030	71021		STR B0*W(TFLAG)
15014	13370	15235		EX-COM MAGGY*W(GMTEF6)*FORCE
15015	11530	71021	GCHRIS	ENT A*W(TFLAG)*ANOT
15016	61000	15015		JP GCHRIS
15017	16030	71021		STR B0*W(TFLAG)
15020	13370	15237		EX-COM MAGGY*W(GMTEF8)*FORCE
15021	11530	71021	GLEA	ENT A*W(TFLAG)*ANOT
15022	61000	15021		JP GLEA
15023	16030	15242	GTEDDI	STR B0*W(GBAG)
15024	65000	15172		RJP NATTAB
15025	10030	65242		PUT W(MTN)*W(GID)
15026	14030	65210		
15027	16020	65211		STR B0*U(GID+1)
15030	16010	65211		STR B0*L(GID+1)
15031	10010	70763		PUT L(IMONTH)*U(GID+2)
15032	14020	65212		
15033	10010	70762		PUT L(IDAY)*L(GID+2)
15034	14010	65212		
15035	10010	70761		PUT L(IHOUR)*U(GID+3)
15036	14020	65213		
15037	10010	70760		PUT L(IMINUTE)*L(GID+3)
15040	14010	65213		
15041	10010	70757		PUT L(ISEC)*U(GID+4)
15042	14020	65214		
15043	74370	15241		OUT MAGGY*W(GBUFID)*FORCE
15044	13370	15231		EX-COM MAGGY*W(GMTEF2)*FORCE
15045	12100	00000	GAGN	ENT B1*0
15046	12200	00000		ENT B2*0
15047	12300	00000		ENT B3*0
15050	12400	00000		ENT B4*0
15051	12500	00000		ENT B5*0
15052	12600	00000		ENT B6*0
15053	12700	00000		ENT B7*0
15054	10030	00160		ENT 0*W(CLOCK)
15055	26030	15243		ADD 0*W(GRATE)
15056	14030	71002		STR 0*W(CTIMER)
15057	11030	00160	GALPHA	ENT A*W(160)

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15060	21630	71002		SUB	A*W(GTIMER)*AP05
15061	61000	15057		JP	GALPHA
15062	11030	15243		ENT	A*W(GRATE)
15063	24030	71002		RPL	A+Y***(GTIMER)
15064	65000	14745		GIN	
15065	71700	00004	GH0	BSK	B7*4
15066	61000	15065		JP	GH0
15067	11410	15242		ENT	A*L(GBAG)*AZERO
15070	61000	15103		JP	GPACL
15071	10056	65171	GPACU	ENT	Q*LX(GTHRESH+B6)
15072	14021	17637		STR	Q+U(GHIGH+B1)
15073	22056	65171		MUL	LX(GTHRESH+B6)
15074	34036	65132		RPL	Y+Q*W(GSXI+B6)
15075	12101	00001	GCON1	ENT	B1*B1+1
15076	71600	00016		BSK	B6*140
15077	61000	15071		JP	GPACU
15100	16050	15242		STR	B0*CPL(GBAG)
15101	12101	77760		ENT	B1*B1-150
15102	61000	15113		JP	GQ
15103	10056	65171	GPACL	ENT	Q*LX(GTHRESH+U6)
15104	14011	17637		STR	Q*L(GHIGH+B1)
15105	22056	65171		MUL	LX(GTHRESH+B6)
15106	34036	65132		RPL	Y+Q*W(GSXI+B6)
15107	12101	00001	GCON2	ENT	B1*B1+1
15110	71600	00016		BSK	B6*140
15111	61000	15103		JP	GPACL
15112	16010	15242		STR	BC*L(GBAG)
15113	71300	02335	GQ	BSK	B3*12050
15114	11400	00000		ENT	A*0*AZERO
15115	61000	15121		JP	GOUTH1
15116	71100	22237	GQ0	BSK	B1*93750
15117	72100	15120		BJP	B1*GWEST
15120	61000	15124	GWEST	JP	GFULL
15121	74370	15224	GOUTH1	OUT	MAGGY*W(GBUFH1)*FORCE
15122	13370	15231		EX-COM	MAGGY*W(GMTEF2)*FORCE
15123	61000	15116		JP	GQ0
15124	71200	16514	GFULL	BSK	B2*16514
15125	61000	15057		JP	GALPHA
15126	61000	15142		JP	GDIVN
15127	10034	65132	GCONVOLT	ENT	Q*W(GSXI+B4)
15130	22030	71434		MUL	62000000
15131	15034	65132		STR	A*W(GSXI+B4)
15132	71400	00016		BSK	B4*140
15133	61000	15127		JP	GCONVOLT
15134	10034	65151	GCONVOLT1	ENT	Q*W(GSXI+B4)
15135	22030	71434		MUL	62000000
15136	15034	65151		STR	A*W(GSXI+B4)
15137	71400	00016		BSK	B4*140
15140	61000	15134		JP	GCONVOLT1
15141	61000	15163		JP	GPONG
15142	10034	65132	GDIVN	ENT	Q*W(GSXI+B4)
15143	11030	00000		CL	A
15144	23000	16514		DIV	75000
15145	14034	65151		STR	Q*W(GSXI+B4)
15146	71400	00016		BSK	B4*140
15147	61000	15142		JP	GDIVN
15150	10034	65151	GSQR1	ENT	Q*W(GSXI+B4)
15151	23070	00000		SQRT	

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15152	14034	15205		STR	Q*W(GRMS+B4)
15153	71400	00016		BSK	B4*14D
15154	61000	15150		JP	GSORT
15155	10034	15205	GHOLD	ENT	Q*W(GRMS+B4)
15156	22000	00003		MUL	3
15157	14034	65171		STR	Q*W(GTHRESH+B4)
15160	71400	00016		BSK	B4*14D
15161	61000	15155		JP	GHOLD
15162	61000	15127		JP	GCONVOLT
15163	63340	15163	GPONG	JP	GPONG*MAG00
15164	12000	00000	GBILL	NO-OP	
15165	71400	23420		BSK	B4*10000D
15166	61000	15164		JP	GBILL
15167	13370	15233		EX-COM	MAGGY*W(GMTEF4)*FORCE
15170	13130	17614		EX-COM	SAND*W(STEP3)*FORCE
15171	51010	14755		RETURN	
15172	00000	00000	NATTAB	ENTRY	
15173	11031	65050	GSTUFF	ENT	A*W(NATT+B1)
15174	15022	65215		STR	A*U(GNATT+B2)
15175	12101	00001		ENT	B1*B1+1
15176	11031	65050		ENT	A*W(NATT+B1)
15177	15012	65215		STR	A*L(GNATT+B2)
15200	12202	00001		ENT	B2*B2+1
15201	71100	00017		BSK	B1*150
15202	61000	15173		JP	GSTUFF
15203	12200	00000		ENT	B2*U
15204	61010	15172		EXIT	
15224	42075	17637	GRMS	RESERVE	150
15225	65207	65170	GBUFHI	U-TAGGHIGH+9374D*GHIGH	
15226	00000	00400	GBUFIN	U-TAGGTHRESH+14D*GARBAGE2	
15227	00000	00140	GADEF1	0	400
15230	00006	00000	GADEF2	140	
15231	00000	53250	GMTEF1	600000	
15232	00000	53250	GMTEF2	53250	
15233	00000	73250	GMTEF3	53250	
15234	00000	73250	GMTEF4	73250	
15235	00001	17250	GMTEF5	73250	
15236	00001	17250	GMTEF6	117250	
15237	00000	17250	GMTEF7	117250	
15240	00000	17250	GMTEF8	017250	
15241	65224	65210	GMTEF9	017250	
			GBUFID	U-TAGGID+12D*GID	
			GBAG	RESERVE	1
15243	00000	00004	GRATE	4	
				END-PROC	GNOISE
15244	00000	00000	GTT	PROCEDURE	GTTY
15245	15030	15732		STR	A*W(ASTORE)
15246	14030	15733		STR	Q*W(GSTORE)
15247	10030	00167		PUT	W(00167)*W(BSTORE)
15250	14030	15734			
15251	17330	15737		STR	TELY*W(THOLD)
15252	10000	00777		ENT	Q*777
15253	11030	15737		ENT	A*W(THOLD)
15254	43400	00101		COM	MASK*101*AZERO
15255	61000	15260		JP	GTT1
15256	65000	01002		RJP	KEYIN
15257	61000	15312		JP	CONTIN+2
15260	43500	00106	GTT1	COM	MASK*106*ANOT
					TEST FOR F

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15261	61000	15301		JP	GTTF	
15262	43560	00104		COM	MASK*104*ANOT	TEST FOR D
15263	61000	15317		JP	GTTD	
15264	43560	00122		COM	MASK*122*ANOT	TEST FOR R
15265	61000	15342		JP	GTTR	
15266	43560	00125		COM	MASK*125*ANOT	TEST FOR U
15267	61000	15335		JP	GTU	
15270	43500	00103		COM	MASK*103*ANOT	TEST FOR C
15271	61000	15277		JP	GTTC	
15272	43560	00120		COM	MASK*120*ANOT	TEST FOR P
15273	61000	15375		JP	GTTP	
15274	43500	00107		COM	MASK*107*ANOT	TEST FOR G
15275	61000	15345		JP	GTG	
15276	61000	15312		JP	CONTIN+2	ILLEGAL CODE IGNORE IT
15277	37030	71416	GTTC	RPL	Y-1*(HANGTIME)	
15300	61000	15312		JP	CONTIN+2	
15301	10000	00001	GTTF	SET	FORCE*T0*1	
15302	14030	65251				
15303	12700	00000		ENT	B7*0	
15304	10000	00006		ENT	Q*6	
15305	14037	71015		STR	Q*(THCTR1+B7)	
15306	71700	00002		BSK	B7*2	
15307	61000	15304		JP	GTTF+3	
15310	13320	15751	CONTIN	EX-COM	TELY*(MACL)	
15311	13320	15752		EX-COM	TELY*(KEX)	
15312	10030	15734		PUT	W(BSTORE)*W(00167)	
15313	14030	00167				
15314	11030	15732		ENT	A*(ASTORE)	
15315	10030	15733		ENT	Q*(QSTORE)	
15316	60110	15244		RETURN	RIL	
15317	11430	71024	GTTD	ENT	A*(CFLAG)*AZERO	
15320	61000	15633		JP	GTTD1A	
15321	11000	00003		SET	CHANGE*T0*CHANGE+3	
15322	24030	70770				
15323	10030	70770	GTTD1	ENT	Q*(CHANGE)	
15324	22000	00001		MUL	1	
15325	26200	00000		ADD	Q*0*APQS	
15326	14000	00000		CP	Q	
15327	27600	00006		SUB	Q*6*QPQS	
15330	61000	15312		JP	CONTIN+2	
15331	10600	00006		ENT	Q*6*APQS	
15332	14000	00000		CP	Q	
15333	14030	70770		STR	Q*(CHANGE)	
15334	61000	15312		JP	CONTIN+2	
15335	11430	71024	GTU	ENT	A*(CFLAG)*AZERO	
15336	61000	15647		JP	GTU1A	
15337	10000	00003		SET	CHANGE*T0*CHANGE-3	
15340	35030	70770				
15341	61000	15223		JP	GTTD1	
15342	10000	00001	GTTR	SET	RESET*T0*1	
15343	14030	70754				
15344	61000	15310		JP	CONTIN	
15345	13320	15751	GTG	EX-COM	TELY*(MACL)	
15346	13320	15752		EX-COM	TELY*(KEX)	
15347	10030	15740		PUT	W(RESTAT)*W(INM)	
15350	14030	00046				
15351	75330	15750		IN	TELY*(BUFFET)*MONITOR	
15352	61000	15312		JP	CONTIN+2	

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15353	15030	15732	GTTG1	STR	A*W(ASTORE)	
15354	14030	15733		STR	Q*W(GSTORE)	
15355	10030	00167		PUT	W(00167)*W(BSTORE)	
15356	14030	15734				
15357	11030	15736		ENT	A*W(KAT)	
15360	21000	00100		SUB	A*100	
15361	70000	00016		RPT	16	
15362	21400	00001		SUB	A*1*AZERO	
15363	61000	15345		JP	GTTG	
15364	10000	00015		ENT	Q*15	
15365	27010	00167		SUB	Q*L(00167)	
15366	14030	15735		STR	Q*W(THD)	
15367	10000	00001		ENT	Q*1	
15370	05030	15735		LSH	Q*W(THD)	
15371	11010	70764		ENT	A*L(RLM)	
15372	53040	77777		SEL	SU*X77777	
15373	15010	70764		STR	A*L(RLM)	
15374	61000	15312		JP	CONTIN+2	
15375	13320	15751	GTPP	EX-COM	TELY*W(MACL)	
15376	13320	15752		EX-COM	TELY*W(KEX)	
15377	10030	15741		PUT	W(RESTAT1)*W(INM)	
15400	14030	00046				
15401	75330	15750		IN	TELY*W(BUFFET)*MONITOR	
15402	61000	15312		JP	CONTIN+2	
15403	15030	15732	GTPP1	STR	A*W(ASTORE)	
15404	14030	15733		STR	Q*W(GSTORE)	
15405	10030	00167		PUT	W(00167)*W(BSTORE)	
15406	14030	15734				
15407	10000	00777		ENT	Q*777	
15410	11030	15736		ENT	A*W(KAT)	
15411	43500	00101		COM	MASK*101*ANOT	TEST FOR A
15412	61000	15477		JP	GTTA	
15413	43500	00123		COM	MASK*123*ANOT	TEST FOR S
15414	61000	15555		JP	GTT5	
15415	43500	00124		COM	MASK*124*ANOT	TEST FOR T
15416	61000	15421		JP	GTTT	
15417	61000	15375		JP	GTPP	
15420	61000	15312		JP	CONTIN+2	
15421	13320	15751	GTTT	EX-COM	TELY*W(MACL)	
15422	13320	15752		EX-COM	TELY*W(KEX)	
15423	10030	15742		PUT	W(RESTAT2)*W(INM)	
15424	14030	00046				
15425	75330	15750		IN	TELY*W(BUFFET)*MONITOR	
15426	61000	15312		JP	CONTIN+2	
15427	15030	15732	GTTT1	STR	A*W(ASTORE)	
15430	14030	15733		STR	Q*W(GSTORE)	
15431	10030	00167		PUT	W(167)*W(BSTORE)	
15432	14030	15734				
15433	10030	15736		ENT	Q*W(KAT)	
15434	11000	00066		ENT	A*66	
15435	04370	00000		COM	Q*A*YMORE	
15436	61000	15421		JP	GTTT	
15437	11030	15736		ENT	A*W(KAT)	
15440	21600	00061		SUB	A*61*AP05	
15441	61000	15421		JP	GTTT	
15442	27000	00060		SUB	Q*60	
15443	14040	00000		STR	Q*A	
15444	27000	00001		SUB	Q*1	

15445	05000	00003		LSH Q*3
15446	26070	00000		ADD Q*A
15447	14030	15735		STR Q*W(THD)
15450	13320	15751	GTTT3	EX-COM TELY*W(MACL)
15451	13320	15752		EX-COM TELY*W(KEX)
15452	10030	15743		PUT W(PESTAT3)*W(INM)
15453	14030	00046		
15454	75330	15750		IN TELY*W(BUFFET)*MONITOR
15455	61000	15312		JP CONTIN+2
15456	15030	15732	GTTT2	STR A*W(ASTORE)
15457	16730	15734		STR B7*W(BSTORE)
15460	14030	15733		STR Q*W(USTORE)
15461	10030	15736		ENT Q*W(KAT)
15462	11000	00072		ENT A*72
15463	04370	00000		COM Q*A*YMORE
15464	61000	15450		JP GTTIT3
15465	11030	15736		ENT A*W(KAT)
15466	21600	00061		SUB A*61*AP0S
15467	61000	15450		JP GTTIT3
15470	27000	00061		SUB Q*61
15471	26030	15735		ADD Q*W(THD)
15472	11030	70765		ENT A*W(RLMTTY)
15473	52000	00077		SEL CL*77
15474	26070	00000		ADD Q*A
15475	14040	70765		STR Q*W(RLMTTY)
15476	61000	15312		JP CONTIN+2
15477	13320	15751	GTTA	EX-COM TELY*W(MACL)
15500	13320	15752		EX-COM TELY*W(KEX)
15501	10030	15744		PUT W(PESTAT4)*W(INM)
15502	14030	00046		
15503	75330	15750		IN TELY*W(BUFFET)*MONITOR
15504	61000	15312		JP CONTIN+2
15505	15030	15732	GTTA1	STR A*W(ASTORE)
15506	14030	15733		STR Q*W(USTORE)
15507	10030	00167		PUT W(00167)*W(BSTORE)
15510	14030	15734		
15511	10030	15736		ENT Q*W(KAT)
15512	11000	00063		ENT A*63
15513	04370	00000		COM Q*A*YMORE
15514	61000	15477		JP GTTA
15515	11030	15736		ENT A*W(KAT)
15516	21600	00061		SUB A*61*AP0S
15517	61000	15477		JP GTTA
15520	27000	00061		SUB Q*61
15521	14040	00000		STR Q*A
15522	06000	00003		LSH A*3
15523	15030	15735		STR A*W(THD)
15524	13320	15751	GTTA3	EX-COM TELY*W(MACL)
15525	13320	15752		EX-COM TELY*W(KEX)
15526	10030	15747		PUT W(PESTAT7)*W(INM)
15527	14030	00046		
15530	75330	15750		IN TELY*W(BUFFET)*MONITOR
15531	61000	15312		JP CONTIN+2
15532	15030	15732	GTTA2	STR A*W(ASTORE)
15533	14030	15733		STR Q*W(USTORE)
15534	10030	00167		PUT W(00167)*W(BSTORE)
15535	14030	15734		
15536	10030	15736		ENT Q*W(KAT)

15537	11000	00071	ENT	A*71
15540	04370	00000	COM	Q*A*YMORE
15541	61000	15524	JP	GTTA3
15542	11030	15736	ENT	A*W(KAT)
15543	21600	00061	SUB	A*61*AP0S
15544	61000	15524	JP	GTTA3
15545	27000	00060	SUB	Q*60
15546	26030	15735	ADD	Q*W(THD)
15547	11030	70765	ENT	A*W(RLMTTY)
15550	52000	07700	SEL	CL*7700
15551	05000	00006	LSH	Q*6
15552	26070	00000	ADD	Q*A
15553	14030	70765	STR	Q*W(RLMTTY)
15554	61000	15312	JP	CONTIN+2
15555	13320	15751	GTTS	EX-COM TELY*W(MACL)
15556	13320	15752		EX-COM TELY*W(KEX)
15557	75330	15750	IN	TELY*W(BUFFET)*MONITOR
15560	10030	15745	PUT	W(RESTATS)*W(INM)
15561	14030	00046		
15562	61000	15312	JP	CONTIN+2
15563	15030	15732	GTTS1	STR A*W(ASTORE)
15564	14030	15733		STR Q*W(QSTORE)
15565	10030	00167	PUT	W(00167)*W(BSTORE)
15566	14030	15734		
15567	10030	15736	ENT	Q*W(KAT)
15570	11000	00065	ENT	A*65
15571	04370	00000	COM	Q*A*YMORE
15572	61000	15555	JP	GTTTS
15573	11030	15736	ENT	A*W(KAT)
15574	21600	00061	SUB	A*61*AP0S
15575	61000	15555	JP	GTTTS
15576	27000	00060	SUB	Q*62
15577	14040	00000	STR	Q*A
15600	06000	00000	LSH	A*3
15601	15030	15735	STR	A*W(THD)
15602	13320	15751	GTTS3	EX-COM TELY*W(MACL)
15603	13320	15752		EX-COM TELY*W(KEX)
15604	10030	15746	PUT	W(RESTAT6)*W(INM)
15605	14030	00046		
15606	75330	15750	IN	TELY*W(BUFFET)*MONITOR
15607	61000	15312	JP	CONTIN+2
15610	15030	15732	GTTS2	STR A*W(ASTORE)
15611	14030	15733		STR Q*W(QSTORE)
15612	10030	00167	PUT	W(00167)*W(BSTORE)
15613	14030	15734		
15614	10030	15736	ENT	Q*W(KAT)
15615	11000	00071	ENT	A*71
15616	04370	00000	COM	Q*A*YMORE
15617	61000	15602	JP	GTTTS3
15620	11030	15736	ENT	A*W(KAT)
15621	21600	00061	SUB	A*61*AP0S
15622	61000	15602	JP	GTTTS3
15623	27000	00060	SUB	Q*60
15624	26030	15735	ADD	Q*W(THD)
15625	11030	70765	ENT	A*W(RLMTTY)
15626	52030	71435	SEL	CL*770000
15627	05000	00014	LSH	Q*120
15630	26070	00000	ADD	Q*A

15631	14030	70765		STR	Q*W(RLMTTY)
15632	61000	15312		JP	CONTIN+2
15633	11000	00012	GTTD1A	SET	CHANGE*TO*CHANGE+100
15634	24030	70770			
15635	10030	70770	GTTD1B	ENT	Q*W(CHANGE)
15636	22000	00001		MUL	1
15637	20600	00000		ADD	A*0*AP0S
15640	14000	00000		CP	0
15641	27600	00024		SUB	Q*200*QPCS
15642	61000	15312		JP	CONTIN+2
15643	10600	00024		ENT	Q*200*AP0S
15644	14030	00000		CP	0
15645	14030	70770		STR	Q*W(CHANGE)
15646	61000	15312		JP	CONTIN+2
15647	10000	00012	GTTU1A	SET	CHANGE*TO*CHANGE-100
15650	35030	70770			
15651	61000	15635		JP	GTTD1B
15652	12000	00000	GTTG1A	NO-OP	
15653	15030	15732		STR	A*W(ASTORE)
15654	11010	15652		ENT	A*L(GTTG1A)
15655	15010	15244		STR	A*L(GTTY)
15656	11030	15732		ENT	A*W(ASTORE)
15657	61000	15353		JP	GTTG1
15660	12000	00000	GTTT1B	NO-OP	
15661	15030	15732		STR	A*W(ASTORE)
15662	11010	15660		ENT	A*L(GTTT1B)
15663	15010	15244		STR	A*L(GTTY)
15664	11030	15732		ENT	A*W(ASTORE)
15665	61000	15403		JP	GTTT1
15666	12000	00000	GTTT1C	NO-OP	
15667	15030	15732		STR	A*W(ASTORE)
15670	11010	15666		ENT	A*L(GTTT1C)
15671	15010	15244		STR	A*L(GTTY)
15672	11030	15732		ENT	A*W(ASTORE)
15673	61000	15427		JP	GTTT1
15674	12000	00000	GTTT2D	NO-OP	
15675	15030	15732		STR	A*W(ASTORE)
15676	11010	15674		ENT	A*L(GTTT2D)
15677	15010	15244		STR	A*L(GTTY)
15700	11030	15732		ENT	A*W(ASTORE)
15701	61000	15456		JP	GTTT2
15702	12000	00000	GTTA1E	NO-OP	
15703	15030	15732		STR	A*W(ASTORE)
15704	11010	15702		ENT	A*L(GTTA1E)
15705	15010	15244		STR	A*L(GTTY)
15706	11030	15732		ENT	A*W(ASTORE)
15707	61000	15505		JP	GTTA1
15710	12000	00000	GTTT1F	NO-OP	
15711	15030	15732		STR	A*W(ASTORE)
15712	11010	15710		ENT	A*L(GTTT1F)
15713	15010	15244		STR	A*L(GTTY)
15714	11030	15732		ENT	A*W(ASTORE)
15715	61000	15563		JP	GTTT1
15716	12000	00000	GTTT2G	NO-OP	
15717	15030	15732		STR	A*W(ASTORE)
15720	11010	15716		ENT	A*L(GTTT2G)
15721	15010	15244		STR	A*L(GTTY)
15722	11030	15732		ENT	A*W(ASTORE)

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15723	61000	15610		JP	GTT52
15724	12000	00000	GTTA2H	N0-0P	
15725	15030	15732		STR	A* (ASTORE)
15726	11010	15724		ENT	A*L(GTTA2H)
15727	15010	15244		STR	A*L(GTTY)
15730	11030	15732		ENT	A*W(ASTORE)
15731	61000	15532		JP	GTTA2
15732	00000	00000	ASTORE	0	
15733	00000	00000	QSTORE	0	
15734	00000	00000	BSTORE	0	
15735	00000	00000	THD	0	
15736	00000	00000	KAT	0	
15737	00000	00000	THOLD	0	
15740	65000	15652	RESTAT	RJP	GTTG1A
15741	65000	15660	RESTAT1	RJP	GTTPIB
15742	65000	15666	RESTAT2	RJP	GTTT1C
15743	65000	15674	RESTAT3	RJP	GTTT2D
15744	65000	15702	RESTAT4	RJP	GTTA1E
15745	65000	15710	RESTAT5	RJP	GTT51F
15746	65000	15716	RESTAT6	RJP	GTT52G
15747	65000	15724	RESTAT7	RJP	GTTA2H
15750	15736	15736	BUFFET	U-TAGKAT*KAT	
15751	00000	00013	MACL	0	13
15752	00000	00030	KEX	0	30
15753	00000	00000		END-PROC	GTTY
15754	11530	70754	JUMPINT0	PROCEDURE	PROHISP
15755	61000	15763		ENT	A*W(RESET)*ANOT
15756	16030	70754		JP	J2
15757	16030	71010		STR	B0*W(RESET)
15760	16030	71016		STR	B0*W(THCTR1)
15761	16030	71017		STR	B0*W(THCTR1+1)
15762	16030	65251		STR	B0*W(THCTR1+2)
15763	12100	44475	J2	STR	B0*W(FORCE)
15764	16031	17637		ENT	B1*18749D
15765	72100	15764		STR	B0*W(LEV+B1)
15766	16030	65236		BJP	B1*J2+1
15767	16030	65235		STR	B0*W(SSBC)
15770	16030	65240		STR	B0*W(ETL)
15771	16030	65234		STR	B0*W(SSSS)
15772	10000	00002		STR	B0*W(ESTY)
15773	14030	65241		PUT	2*W(ICMSEC)
15774	12100	00035		ENT	B1*29D
15775	16031	71025	PCS	INITIALIZE	CFIVE
15776	72100	15775		STR	B0*W(CFIVE+B1)
15777	11030	00160	J9	BJP	B1*PCS
16000	20000	00002		ENT	A*W(160)
16001	15030	71022		ADD	A*2
16002	11030	00160		STR	A*W(TCLOCK)
16003	20030	71432		ENT	A*W(160)
16004	15030	71023		ADD	A*60000D
16005	13130	71423		STR	A*W(INCLOCK)
16006	13130	17512		EX-COM	SAND*0*FORCE
16007	12200	00002		EX-COM	SAND*W(STEP1)*FORCE
16010	61000	16023		ENT	B2*2
16011	12200	00002	PROJ	JP	P3
16012	11430	70754		ENT	B2*2
16013	61000	16330		ENT	A*W(RESET)*AZERO
				JP	JMPNT

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16014	11030	00160	P5	ENT	A*W(160)
16015	04630	71022		COM	A*W(TCLOCK)*YLESS
16016	61000	16014		JP	P5
16017	20000	00002		ADD	A*2
16020	15030	71022		STR	A*W(TCLOCK)
16021	11000	00002		ENT	A*2
16022	24030	65241		RPL	A+Y*W(ICMSEC)
16023	11030	00160	P3	ENT	A*W(150)
16024	21730	71023		SUB	A*W(INCLOCK)*ANEG
16025	61000	16225		JP	PHSEXT
16026	73270	17550		IN	SAMPLE*W(ADBF)
16027	13270	17561		EX-COM	SAMPLE*W(MAD)*FORCE
16030	70000	00006		RPT	6
16031	12000	00000		NO-OP	
16032	73270	17621		IN	SAMPLE*W(SPLED)
16033	13260	17552		EX-COM	SAMPLE*W(FLIP1)
16034	10030	65241		ENT	Q*W(ICMSEC)
16035	27700	00004		SUB	Q*4*QNEG
16036	65000	16154		RJP	PZZZ
16037	11430	65251	PR0H	ENT	A*W(FORCE)*AZERO
16040	61000	16054		JP	GOMER
16041	16032	71015		STR	B0*W(THCTR1+B2)
16042	12500	00010		ENT	B5*AD
16043	61000	16210		JP	SETCFIVE
16044	10031	71025	PRH2	ENT	Q*W(CFIVE+B1)
16045	14036	71025		STR	Q*W(CFIVE+B6)
16046	27000	00001		SUB	Q*1
16047	27732	70741		SUB	Q*W(THAT+B2)*QNEG
16050	36032	71015		RPL	Y+1*W(THCTR1+B2)
16051	12101	00001		INCREMENT	B1*1
16052	12606	00001		INCREMENT	B6*1
16053	72500	16044		BJP	B5*PRH2
16054	10052	64336	GOMER	ENT	Q*LX(SHTDTA+B2)
16055	11430	65251		ENT	A*W(FORCE)*AZERO
16056	61000	16062		JP	PRH41
16057	14036	71025		STR	Q*W(CFIVE+B6)
16060	27000	00001		SUB	Q*1
16061	27732	70741		SUB	Q*W(THAT+B2)*QNEG
16062	36032	71015	PRH41	RPL	Y+1*W(THCTR1+B2)
16063	11032	71015		ENT	A*W(THCTR1+B2)
16064	21700	00006		SUB	A*6*ANEG
16065	61000	16070		JP	PR0M
16066	72200	16037		BJP	B2*PR0H
16067	61000	16011		JP	PR0J
16070	11430	65234	PR0M	ENT	A*W(TESTY)*AZERO
16071	61000	16152		JP	PRATT
16072	36030	65234		RPL	Y+1*W(TESTY)
16073	11030	65251		ENT	A*W(FORCE)
16074	15020	64662		STR	A*U(ID+2)
16075	13130	17613		EX-COM	SAND*W(STEP2)*FORCE
16076	66431	00000		SIL-EX	SHOTCHAN
16077	65000	13626		UPITIME	
16100	66430	00000		RIL-EX	SHOTCHAN
16101	10030	00160		ENT	Q*W(160)
16102	26030	70756		ADD	Q*W(ICCY5)
16103	27030	70755		SUB	Q*W(LASTIME)
16104	22000	00764		MUL	764
16105	26000	00400		ADD	Q*400

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16106	03000	00011		RSH	AQ*9D
16107	14010	64665		STR	Q*L(ID+5)
16110	10030	70757		ENT	Q** (ISEC)
16111	14020	64665		STR	Q*U(ID+5)
16112	10030	70760		ENT	Q** (IMINUTE)
16113	14010	64664		STR	Q*L(ID+4)
16114	10030	70761		ENT	Q** (IHOUR)
16115	14020	64664		STR	Q*U(ID+4)
16116	10030	70762		ENT	Q** (IDAY)
16117	14010	64663		STR	Q*L(ID+3)
16120	10030	70763		ENT	Q** (IMONTH)
16121	14020	64663		STR	Q*U(ID+3)
16122	11030	65237		ENT	A** (MFLAG)
16123	15010	64723		STR	A*L(ID+35D)
16124	11030	65235		ENT	A** (ETL)
16125	15030	65247		STR	A** (SA)
16126	11430	70332		ENT	A** (INI)*4ZERO
16127	61000	16133		JP	PATCH
16130	16050	70332		STR	B0*CPL(INI)
16131	10030	00160		PUT	W(160) W(CWTIMER)
16132	14030	70737			
16133	11430	65251	PATCH	ENT	A** (FORCE)*4ZERO
16134	61000	16143		JP	B0M
16135	10030	00160		ENT	Q** (160)
16136	27030	70755		SUB	Q** (LASTIME)
16137	27000	74000		SUB	Q*307200
16140	01000	00012		RSH	Q*100
16141	14070	65356		STR	Q*CPW(CTSND5)
16142	61000	16147		JP	PIA
16143	10030	00160	B0M	ENT	Q** (160)
16144	26000	11610		ADD	Q*50000
16145	16050	70332		STR	B0*CPL(INI)
16146	61000	16151		JP	PR4
16147	10030	00160	PIA	ENT	Q** (160)
16150	26000	35230		ADD	Q*150000
16151	14030	71023	PR4	STR	Q** (INCL0CK)
16152	72200	16037	PRATT	BJP	B2*PR0H
16153	61000	16011		JP	PR0J
16154	12000	00000	PZZZ	NO-0P	
16155	16030	65241		STR	B0** (ICMSEC)
16156	36030	65236		RPL	Y+1** (SSBC)
16157	12500	00011		ENT	B5*9D
16160	11030	65235		ENT	A** (ETL)
16161	20000	00011		ADD	A*9D
16162	04700	44476		COM	A*18750D*YMORE
16163	61000	16166		JP	PZZC
16164	12170	00000		ENT	B1*A
16165	61000	16170		JP	PZZD
16166	16030	65235	PZZC	STR	B0** (ETL)
16167	12100	00011		ENT	B1*9D
16170	11530	65240	PZZD	ENT	A** (SSSS)*AN0T
16171	61000	16202		JP	PZZB
16172	10055	64336	PZZA	ENT	Q*LX(SHTDTA+B5)
16173	14011	17637		STR	Q*L(LEV+B1)
16174	72100	16175		INCREMENT	B1*-1
16175	72500	16172		BJP	B5*PZZA
16176	16030	65240		STR	B0** (SSSS)
16177	11000	00012		ENT	A*100

16200	24030	65235		RPL	A+Y*W(FTL)
16201	61010	16154		JP	L(PZZ
16202	10055	64336	PZZB	ENT	Q*LX(TOTA+B5)
16203	14021	17637		STR	Q*U(LEV+B1)
16204	72100	16205		INCREMENT	B1*-1
16205	72500	16202		BJP	B5*PZZB
16206	36030	65240		RPL	Y+1*W(SSSS)
16207	61010	16154		JP	L(PZZZ)
16210	11402	00000	SEICFIVE	ENT	A*B2*AZERO
16211	61000	16215		JP	SET2
16212	12100	00001		ENT	B1*1
16213	12600	00000		ENT	B6*0
16214	61000	16044		JP	PRH2
16215	21400	00001	SET2	SUB	A*1*AZERO
16216	61000	16222		JP	SET3
16217	12100	00013		ENT	B1*13
16220	12600	00012		ENT	B6*12
16221	61000	16044		JP	PRH2
16222	12100	00025	SET3	ENT	B1*25
16223	12600	00024		ENT	B6*24
16224	61000	16044		JP	PRH2
16225	11410	70332	PHSEXT	ENT	A*L(INI)*AZERO
16226	61000	16237		JP	PH6
16227	66431	00000		SIL-EX	SHOTCHAN
16230	65000	13626		RJP	UPITIME
16231	66430	00000		RIL-EX	SHOTCHAN
16232	16030	00160		STR	B0*W(160)
16233	16030	65241		STR	B0*W(ICMSEC)
16234	16030	70755		STR	B0*W(LASTIME)
16235	16030	65356		STR	B0*W(CTSND5)
16236	61000	15777		JP	J9
16237	16030	65235	PH6	STR	B0*W(ETL)
16240	36030	70767		RPL	Y+1*W(HOURCNTR)
16241	16030	70754		STR	B0*W(RESET)
16242	11030	70770		ENT	A*W(CHANGE)
16243	24030	65356		RPL	A+Y*W(CTSND5)
16244	16030	70770		STR	B0*W(CHANGE)
16245	13130	17614		EX-COM	SAND*W(STEP3)*FORCE
16246	11530	65234		ENT	A*W(TE5TY)ANDT
16247	61000	16252		JP	CBJ
16250	16020	64662		STR	B0*U(ID+2)
16251	61000	16253		JP	CBK
16252	16060	64662	CHJ	STR	B0*CPU(ID+2)
16253	74370	17631	CBK	OUT	MAGGY*W(IDBUF)
16254	12130	65242		ENT	B1*W(MTN)
16255	13371	17555		EX-COM	MAGGY*W(MTCD+B1)*FORCE
16256	11530	71021	ZAP	ENT	A*W(TFLAG)*ANDT
16257	61000	16256		JP	ZAP
16260	16030	71021		STR	B0*W(TFLAG)
16261	11030	65237		ENT	A*W(MFLAG)
16262	21500	00002		SUB	A*2*ANDT
16263	61000	16314		JP	TWIGG
16264	11030	65247		ENT	A*W(SA)
16265	21600	00764		SUB	A*5000*AP05
16266	61000	16314		JP	TWIGG
16267	12170	00000		ENT	B1*A
16270	10030	65237		ENT	Q*W(MFLAG)
16271	26000	00001		ADD	Q*1

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16272	22000	14152		MUL	62500
16273	27000	00001		SUB	Q*1
16274	14030	00162		STR	Q*W(162)
16275	11030	65247		ENT	A*W(SA)
16276	20002	00000		ADD	A*B2
16277	21700	44476		SUB	A*187500*ANE0
16300	61000	16302		JP	TICKLE
16301	11000	00000		ENT	A*0
16302	12370	00000	TICKLE	ENT	B3*A
16303	10031	17637	TWEET	PUT	W(LEV+B1)*W(S0)
16304	14030	65250			
16305	10033	17637		PUT	W(LEV+B3)*W(LEV+B1)
16306	14031	17637			
16307	10030	65250		PUT	W(S0)*W(LEV+B3)
16310	14033	17637			
16311	12101	00001		INCREMENT	B1*1
16312	12303	00001		INCREMENT	B3*1
16313	72200	16303		BJP	B2*TWEET
16314	11530	65237	TWIGG	ENT	A*W(MFLAG)*ANOT
16315	61000	16324		JP	FIVESEC
16316	21500	00001		SUB	A*1*ANOT
16317	61000	16322		JP	TENSEC
16320	74370	17627		OUT	MAGGY*W(MTBF15)
16321	61000	16325		JP	T00T
16322	74370	17625	TENSEC	OUT	MAGGY*W(MTBF10)
16323	61000	16325		JP	T00T
16324	74370	17624	FIVESEC	OUT	MAGGY*W(MTBF5)
16325	12130	65242	T00T	ENT	B1*W(MTN)
16326	13371	17555		EX-COM	MAGGY*W(MTCD+B1)*FORCE
16327	61010	15753		RETURN	
16330	13130	17614	JMPNT	EX-COM	SAND*W(STEP3)*FORCE
16331	61000	15754		JP	JUMPINTO
16332	00000	00000		END-PROC	PROHISP
				PROCEDURE	PTTY
				COMMENT	TYPES LATEST 60 VALUES OF
				COMMENT	TOTAL PROP LOSS AND SN RATIO
16333	65000	10041			TYPET\$CR\$TOTAL PROPAGATION LOSS SN RATIO
16334	76642	06441			
16335	54006	06220			
16336	60414	74164			
16337	51205	60054			
16340	20636	30000			
16341	63500	06241			
16342	64512	00000			
16343	00007	70000			
16344	65000	10041			TYPET\$CR\$RANGE IN HUNDRED YARDS
16345	76624	15647			
16346	45005	15600			
16347	50655	64462			
16350	45440	07141			
16351	62446	30035			
16352	00007	70000			
16353	10030	64350			TYPESRANGE
16354	11000	00000			
16355	65000	10306			
16356	12100	00000		CL	B1
16357	10031	71067	PTTY2	PUT	W(TPL+B1)*W(TYPECELL1)
16360	14030	71064			

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16361	10031	71151	PUT W(SNRAT+B1)*W(TYPECELL2)
16362	14030	71065	
16363	16110	16374	STR B1*L(PTTY1)
16364	65000	10041	TYPETSCRS
16365	76007	70000	
16366	10030	71064	TYPESTYPECELL1*TYPECELL2
16367	11000	00003	
16370	65000	10306	
16371	10030	71065	
16372	11000	00003	
16373	65000	10306	
16374	12100	00000	PTTY1 ENT B1*0
16375	71100	00061	BSK B1*490
16376	61000	16357	JP PTTY2
16377	65000	10041	TYPETSCRS\$PROP LOSS BASED ON 5 MIN AVGES
16400	76616	22060	
16401	00542	06363	
16402	00424	16345	
16403	44002	05600	
16404	25005	55156	
16405	00416	64745	
16406	63007	70000	
16407	12100	00054	ENT B1*440
16410	10031	70333	PUT W(PLVSRGSMIN+B1)*W(TYPECELL1)
16411	14000	71064	
16412	65000	10041	TYPETSCRS
16413	76007	70000	
16414	10030	71064	TYPESTYPECELL1
16415	11000	00003	
16416	65000	10306	
16417	72100	16410	BJP B1*PTTY10
16420	61010	16332	RETURN
16421	00000	00000	END-PROC PTTY
16422	12100	00330	PROCEDURE POUTPUT
16423	16110	16425	COMMENT FEEDS 3 FEET OF PAPER
16424	65000	13614	ENT B1*2160
16425	12100	00000	STR B1*L(POUT3)
16426	72100	16423	LFANOCR
			ENT B1*0
			BJP B1*POUT4
			COMMENT GIVES SIDE BY SIDE LISTING OF
			COMMENT TOTAL PROP LOSS AND S/N RATIO
			COMMENT ON MONROL AT END OF HOUR
			CLEAR240*PLAB
16427	70100	00030	
16430	16030	71233	
16431	12700	71233	FORM-TEXT PLAB*110*TOTAL PROPAGATION LOSS
16432	65000	10176	
16433	00006	00002	
16434	77777	77777	
16435	77000	00000	
16436	66036	62446	
16437	01525	40352	
16440	24322	46634	
16441	03500	14603	
16442	65650	10101	
16443	01010	10101	
16444	12700	71233	FORM-TEXT PLAB*550*S/N RATIO
16445	65000	10176	

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16446	00003	00012	
16447	00000	00077	
16450	77777	77777	
16451	01010	10165	
16452	64500	15424	
16453	66340	30101	
16454	11000	71233	ENT A*PLAB
16455	65000	13425	MONROE
16456	70100	00030	CLEAR24D*PLAB
16457	16030	71233	
16460	12700	71233	FORM-TEXT PLAB*25D*RANGE
16461	65000	10176	
16462	00002	00004	
16463	00000	00077	
16464	77777	77777	
16465	01010	10154	
16466	24503	23001	
16467	10030	64350	FORM-DEC PLAB*31D*RANGE
16470	12700	71241	
16471	11000	00000	
16472	65000	10453	
16473	11000	71233	ENT A*PLAB
16474	65000	13425	RJP MONROE
16475	70100	00030	CLEAR24D*PLAB
16476	16030	71233	
16477	12700	71233	FORM-TEXT PLAB*25D*MONTH
16500	65000	10176	
16501	00002	00004	
16502	00000	00077	
16503	77777	77777	
16504	01010	10147	
16505	03506	63301	
16506	10030	70763	FORM-DEC PLAB*31D*IMONTH
16507	12700	71241	
16510	11000	00000	
16511	65000	10453	
16512	12700	71233	FORM-TEXT PLAB*37D*DAY
16513	65000	10176	
16514	00002	00007	
16515	00777	77777	
16516	77770	00000	
16517	01272	47301	
16520	01010	10101	
16521	10030	70762	FORM-DEC PLAB*41D*IDAY
16522	12700	71241	
16523	11000	00000	
16524	65000	10453	
16525	12700	71233	FORM-TEXT PLAB*46D*HOUR
16526	65000	10176	
16527	00002	00011	
16530	77777	77777	
16531	77000	00000	
16532	33036	75401	
16533	01010	10101	
16534	10030	70761	FORM-DEC PLAB*51D*IHOUR
16535	12700	71245	
16536	11000	00000	
16537	65000	10453	

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16540 12700 71233 FORM-TEXT PLAB*54D*MINUTE

16541 65300 10176

16542 00002 00012

16543 00000 07777

16544 77777 77700

16545 01010 14734

16546 50676 63001

16547 10030 70760

FORM-DEC PLAB*61D*IMINUTE

16550 12700 71247

16551 11000 00000

16552 65000 10453

16553 12700 71233

FORM-TEXT PLAB*64D*SECOND

16554 65000 10176

16555 00002 00014

16556 00000 07777

16557 77777 77700

16560 01010 16530

16561 26035 02701

16562 10030 70757

FORM-DEC PLAB*71D*ISEC

16563 12700 71251

16564 11000 00000

16565 65000 10453

16566 11000 71233

ENT A*PLAB

16567 65000 13425

MONROE

16570 12100 00000

CL B1

16571 70100 00030

P0UT1

CLEAR24D*PLAB

16572 16030 71233

16573 10031 71067

PUT W(TPL+B1)*W(FORMCELL)

16574 14030 71066

16575 10030 71066

FORM-DEC PLAB*1*FORMCELL

16576 12700 71233

16577 11000 00003

16600 65000 10453

16601 10031 71070

PUT W(TPL+1+B1)*W(FORMCELL)

16602 14030 71066

16603 10030 71066

FORM-DEC PLAB*21D*FORMCELL

16604 12700 71237

16605 11000 00003

16606 65000 10453

16607 10031 71151

PUT W(SNRAT+B1)*W(FORMCELL)

16610 14030 71066

16611 10030 71066

FORM-DEC PLAB*41D*FORMCELL

16612 12700 71243

16613 11000 00003

16614 65000 10453

16615 10031 71152

PUT W(SNRAT+1+B1)*W(FORMCELL)

16616 14030 71066

16617 10030 71066

FORM-DEC PLAB*61D*FORMCELL

16620 12700 71247

16621 11000 00003

16622 65000 10453

16623 11000 71233

ENT A*PLAB

16624 65000 13425

MONROE

16625 12101 00001

ENT B1*1+B1

16626 71100 00061

BSK B1*490

16627 61000 16571

JP P0UT1

16630 70100 00030

CLEAR24D*PLAB

16631 16030 71233

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Address	Value 1	Value 2	Instruction
16632	12700	71233	FORM-TEXT PLAB*10*PROP LOSS BASED ON 5 MIN AVGES
16633	65000	10176	
16634	00007	00001	
16635	00007	77777	
16636	77777	77700	
16637	01015	25403	
16640	52014	60365	
16641	65012	52465	
16642	30270	10350	
16643	01100	14734	
16644	50012	47032	
16645	30650	10101	
16646	11000	71233	ENT A*PLAB
16647	65000	13425	MONROE
16650	12100	00054	ENT B1*440
16651	70100	00030	CLEAR240*PLAB
16652	16030	71233	POUT20
16653	10031	70333	PUT W(PLVSRG5MIN+B1)*W(FORMCELL)
16654	14030	71066	
16655	10030	71066	FORM-DEC PLAB*210*FORMCELL
16656	12700	71237	
16657	11000	00003	
16660	65000	10453	
16661	11000	71233	ENT A*PLAB
16662	65000	13425	MONROE
16663	72100	16651	BJP B1*POUT20
16664	61010	16421	RETURN
16665	00000	00000	END-PROC POUTPUT
			PROCEDURE RYTATABLE
			COMMENT FILLS TABLES FOR PRINT
			COMMENT OUT AT END OF HOUR
16666	10030	70767	ENT Q*W(HOURCNTR)
16667	27000	00001	SUB Q*1
16670	22000	00012	MUL 100
16671	14010	00161	STR Q*L(00161)
16672	12200	00000	CL B2
16673	11032	64526	ENT A*W(PROPL+B2)
16674	10032	64545	ENT Q*W(SNTAB+B2)
16675	15031	71067	STR A*W(TPL+B1)
16676	14031	71151	STR Q*W(SNRAT+B1)
16677	12101	00001	ENT F1*1+B1
16700	71200	00011	BSK B2*9D
16701	61000	16673	JP RYTBL1
16702	61010	16665	RETURN
			END-PROC RYTATABLE
			PROGRAM
16703	00000	00000	PROCEDURE RNGETVLT
16704	10030	71264	ENT Q*W(BANG)
16705	22000	01750	MUL 1000D
16706	23000	02000	DIV 1024D
16707	14030	71012	STR Q*W(ALPHA)
16710	10030	71265	ENT Q*W(BANG+1)
16711	22000	01750	MUL 1000D
16712	34030	71012	RPL Y+Q*W(ALPHA)
16713	10030	71266	ENT Q*W(BANG+2)
16714	22030	71432	MUL 60000D
16715	34030	71012	RPL Y+Q*W(ALPHA)
16716	10030	16731	ENT Q*W(DELAYTIME)

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16717	35030	71012		RPL	Y-0*W(ALPHA)	
16720	12100	00000		CL	B1	
16721	10031	71271	MVBANG	ENT	0*W(BANG+5*B1)	
16722	14031	71264		STR	0*W(BANG+B1)	
16723	71100	00124		BSK	B1*124	
16724	61000	16721		JP	MVBANG	
16725	37630	71416		RPL	Y-1*W(BANGTIME)*APOS	IN A REGISTER ALSO
16726	16030	71416		STR	B0*W(BANGTIME)	
16727	65000	14712		RJP	TVLTM RANGE	
16730	61010	16703		RETURN		
16731	00000	00764	DELAYTIME	5000		DELAY TIME IN MS
16732	00000	00000		END-PROC	RNGTVLTM	
				PROCEDURE	SHOTOFF	
				COMMENT	PUTS SHOT TIME IN TABLE BANG	
				COMMENT	ON INTERRUPT FROM BANG BOX	
16733	16510	16774		STR	B5*L(SAVSHOTB5)	
16734	16610	16775		STR	B6*L(SAVSHOTB6)	
16735	16710	16776		STR	B7*L(GEORGESAYS)	
16736	15030	17002		STR	A*W(SAVSHOTA)	
16737	14030	17003		STR	0*W(SAVSHOTQ)	
16740	73070	17622		IN	EXCLOCK*W(BAF)	
16741	62040	16741	WAF	JP	WAF*EXPI	
16742	11030	71417		ENT	A*W(BAF1)	
16743	21630	64335		SUB	A*W(GARBAGE)*APOS	
16744	51040	77777		CP	A	
16745	21600	00003		SUB	A*3*APOS	
16746	61000	16774		JP	SAVSHOTB5	
16747	11030	64335		ENT	A*W(GARBAGE)	
16750	15030	71417		STR	A*W(BAF1)	
16751	65000	13626		UPITIME		
16752	11030	71416		ENT	A*W(BANGTIME)	
16753	21700	00022		SUB	A*22*ANEG	
16754	61000	16774		JP	SAVSHOTB5	
16755	13320	17551		EX-COM	TELY*W(BIF)	
16756	10030	70756		SET	BANG(BANGTIME,ICLOCKCYS)*TO*ICCYS	
16757	12530	71416				
16760	70300	00005				
16761	12605	00000				
16762	14036	71264				
16763	10030	70757		SET	BANG(BANGTIME,BSEC)*TO*ISEC	
16764	14036	71265				
16765	10030	70760		SET	BANG(BANGTIME,BMIN)*TO*IMINUTE	
16766	14036	71266				
16767	10030	70761		SET	BANG(BANGTIME,BHOUR)*TO*IHOUR	
16770	14036	71267				
16771	10030	70762		SET	BANG(BANGTIME,BDAY)*TC*IDAY	
16772	14036	71270				
16773	36030	71416		SET	BANGTIME*TO*BANGTIME+1	
16774	12500	00000	SAVSHOTB5	ENT	B5*0	
16775	12600	00000	SAVSHOTB6	ENT	B6*0	
16776	12700	00000	GEORGESAYS	ENT	B7*0	
16777	11030	17002		ENT	A*W(SAVSHOTA)	
17000	10030	17003		ENT	Q*W(SAVSHOTQ)	
17001	60110	16732		RETURN	RIL	
17002	00000	00000	SAVSHOTA	0		
17003	00000	00000	SAVSHOTQ	0		
17004	00000	00000		END-PROC	SHOTOFF	
				PROCEDURE	EXECP1	

17005	66021	00000	SIL-EX	ALL	
17006	11030	17615	ENT	A*W(TELYCALL)	
17007	15030	00026	STR	A*W(TTYINT)	SET UP TELETYPE INTERRUPT
17010	11030	17617	ENT	A*W(SHOTCALL)	
17011	15030	00030	STR	A*W(SHOTINT)	SET UP SHOT INTERRUPT CHANNEL
17012	11030	17616	ENT	A*W(MAGCALL)	
17013	15030	00027	STR	A*W(MAGINT)	SET UP MAG TAPE INTERRUPT
17014	16030	71417	STR	B0*W(BAF1)	
17015	66330	00000	RIL-EX	TELY	
17016	66370	00000	RIL-EX	MAGGY	
17017	66430	00000	RIL-EX	SHOTCHAN	BANG BOX CHANNEL
17020	10000	03522	PUT	18740*W(WORDS)	
17021	14030	70774			
17022	10000	00011	PUT	90*W(ITEMS)	
17023	14030	70775			
17024	16030	65242	STR	B0*W(MTN)	SET OUTFLAG FOR UNIT 1
17025	10000	00002	PUT	2*W(MFLAG)	
17026	14030	65237			
17027	16030	65245	STR	B0*W(LTAPE)	CLEAR LOW TAPE FLAG
17030	16030	65246	STR	B0*W(PAR)	CLEAR PARITY ERROR FLAG
17031	16030	70766	STR	B0*W(RWT4)	
17032	16030	71021	STR	B0*W(TFLAG)	
17033	13370	17560	EX-COM	MAGGY*W(MCMT)*FORCE	REQUEST CONTROL OF MT
17034	11530	71021	EXAAA	ENT A*W(TFLAG)*ANOT	
17035	61000	17034	JP	EXAAA	WAIT FOR INTRRPT
17036	16050	71024	STR	B0*CPL(CFLAG)	SET GTTY FOR PHASE 1A
17037	16030	71416	STR	B0*W(BANGTIME)	
17040	73270	17550	IN	SAMPLE*W(AOBF)	
17041	13260	17561	EX-COM	SAMPLE*W(MAD)	MASTER CLEAR A/D
17042	16030	65243	STR	B0*W(SHTCTR)	CLEAR SHOT COUNTER
17043	16030	71014	STR	B0*W(SERISCNTR)	
17044	16030	70770	STR	B0*W(CHANGE)	
17045	65000	13323	TAPESTAT		TEST TAPE STATUS
17046	11030	64350	ENT	A*W(RANGE)	
17047	15030	64661	STR	A*W(ID+1)	SET ESTIMATED RANGE IN ID
17050	70100	00132		CLEAR900*BANG	
17051	16030	71264			
17052	61100	17054	JP	EXABA*KEY1	
17053	65000	13677		TIMESYNC	
17054	16030	00160	EXABA	STR B0*W(160)	
17055	16030	70755		STR B0*W(LASTIME)	
17056	16030	65356		STR B0*W(CTSND5)	
17057	10000	00001		PUT 1*U(MTN)	
17060	14020	65242			
17061	65000	14755		GNOISE INPUT*MTN	
17062	65000	10041		TYPET\$CR\$NOISE SAMPLE TAKEN	
17063	76562	05163			
17064	45006	34155			
17065	60544	50064			
17066	41534	55600			
17067	00007	70000			
17070	65000	10041		TYPET\$CR\$SET ATTENUATORS FOR SIGNAL	
17071	76634	56400			
17072	41646	44556			
17073	65416	42062			
17074	63004	62062			
17075	00635	14756			
17076	41547	70000			

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17077	61300	17115	EXACA	JP	EXAA*KEY3	
17100	11500	70754		ENT	A*W(RESET)*ANOT	
17101	61000	17077		JP	EXACA	
17102	65000	10041			TYPETSCRSRESET TAKING ANOTHER NOISE SAMPLE	
17103	76624	56345				
17104	64006	44153				
17105	51564	70041				
17106	56206	45045				
17107	62005	62051				
17110	63450	06341				
17111	55605	44500				
17112	00007	70000				
17113	61000	17054		JP	EXABA	
17114	61000	17077		JP	EXACA	
17115	16030	70764	EXAA	STR	B0*W(RLM)	
17116	16030	70767	PINSERT2	STR	B0*W(HOURCNTR)	
17117	16030	71443		CL	W(WAIT3MIN)	
17120	16030	70765		STR	B0*W(RLMTTY)	CLEAR GRAPH REQUESTS
17121	16030	71263		STR	B0*W(CYCLEFLAG)	
17122	61100	17124		JP	EXAC*KEY1	KEYU SET IF EX CLOCK FAILS
17123	65000	13677			TIMESYNC	SNYC INTERNAL TIMES TO EXTERNAL CLO
17124	16030	00160	EXAC	STR	B0*W(160)	ZERO INTERNAL CLOCK
17125	16030	70755		STR	B0*W(LASTIME)	
17126	16030	65356		STR	B0*W(CTSNOS)	
17127	12000	00000			NO-OP	
17130	12000	00000			NO-OP	
17131	12200	00002		ENT	B2*2	
17132	12100	00010		ENT	B1*10	
17133	10032	65171	EXAB	ENT	Q*W(GTHRESH+B2)	
17134	14021	64660		STR	Q*U(ID+B1)	STORE NOISE THRESHOLD IN ID
17135	11032	65050		ENT	A*W(NATT+B2)	
17136	15011	64660		STR	A*L(ID+B1)	NOISE ATTEN SETTINGS TO ID
17137	72100	17140			INCREMENT B1*-1	
17140	72200	17133		BJP	B2*EXAB	
17141	12000	00000			NO-OP	
17142	16030	70332		STR	B0*W(I-?)	
17143	11000	00005		ENT	A*5	
17144	15030	70753		STR	A*W(REPRATE)	NUMBER OF SHOTS PER HOUR
17145	12000	00000			NO-OP	
17146	16030	65234	EXAE	STR	B0*W(TESTY)	CLEAR DUD FLAG
17147	16030	65251		STR	B0*W(FORCE)	
17150	11030	71263		ENT	A*W(CYCLEFLAG)	
17151	60400	17166		JP	FT2500*AZERO	
17152	21000	00001		SUB	A*1	
17153	60500	17161		JP	FT500*ANOT	
17154	10000	00005	FT60	ENT	Q*5	
17155	36030	71263		RPL	Y+1*W(CYCLEFLAG)	
17156	11000	00170		ENT	A*1200	
17157	12100	00001		ENT	B1*1	
17160	61000	17177		JP	EXAEA	
17161	10000	00004	FT500	ENT	Q*4	
17162	36030	71263		RPL	Y+1*W(CYCLEFLAG)	
17163	11000	00170		ENT	A*1200	
17164	12100	00002		ENT	B1*2	
17165	61000	17177		JP	EXAEA	
17166	10000	00003	FT2500	ENT	Q*3	
17167	12100	00003		ENT	B1*3	
17170	11030	71443		ENT	A*W(WAIT3MIN)	

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17171	60500	17175		JP	PEXEC3*ANOT	
17172	11000	00170		ENT	A*1200	
17173	16070	71443		STR	B0*CPW(WAIT3MIN)	
17174	61000	17177		JP	EXAEA	
17175	36030	71263	PEXEC3	RPL	Y+1*W(CYCLEFLAG)	
17176	11000	00264		ENT	A*1800	
17177	15030	13675	EXAEA	STR	A*W(CYCLENGTH)	TIME BETWEEN SHOTS
17200	14030	70752		STR	Q*W(CODEWORD)	SOURCE LEVEL
17201	16130	70751		STR	B1*W(DEPTH)	DEPTH CODE FOR SHOT
17202	12100	00002		ENT	B1*2	
17203	16031	71015	EXAD	STR	B0*W(THCTR1+B1)	CLEAR THRESHOLD COUNTERS
17204	72100	17203		BJP	B1*EXAD	
17205	12100	00011		ENT	B1*9D	
17206	12200	00000		ENT	B2*0	
17207	10032	65067	EXAG	ENT	Q*W(ATTEN+B2)	PUT
17210	14021	64660		STR	Q*U(ID+B1)	SIGNAL
17211	12202	00001		ENT	B2*B2+1	ATTENUATOR
17212	10032	65067		ENT	Q*W(ATTEN+B2)	VALUES
17213	14011	64660		STR	Q*L(ID+B1)	IN
17214	12202	00001		ENT	B2*B2+1	
17215	71100	00015		BSK	B1*13D	
17216	61000	17207		JP	EXAG	RECORD
17217	16010	64723		STR	B0*L(ID+35D)	
17220	36030	65243		RPL	Y+1*W(SHTCTR)	
17221	15010	64660		STR	A*L(ID)	CURRENT SHOT NUMBER
17222	11030	70751		ENT	A*W(DEPTH)	
17223	15010	64662		STR	A*L(ID+2)	
17224	12100	00002		ENT	B1*2	
17225	11031	65067	EXAL	ENT	A*W(ATTEN+B1)	
17226	21631	65050		SUB	A*W(NATT+B1)*AP05	
17227	61000	17232		JP	EY	
17230	60400	17232		JP	EY*AZERO	
17231	61000	17235		JP	EZ1	
17232	10000	00001	EY	PUT	1*W(DUMP)	
17233	14030	71063				
17234	61000	17256		JP	EXAJ	
17235	21400	00001	EZ1	SUB	A*1*AZERO	
17236	61000	17242		JP	EZ2	
17237	10000	00012		PUT	100*W(DUMP)	
17240	14030	71063				
17241	61000	17256		JP	EXAJ	
17242	21400	00001	EZ2	SUB	A*1*AZERO	
17243	61000	17247		JP	EZ3	
17244	10000	00144		PUT	1000*W(DUMP)	
17245	14030	71063				
17246	61000	17256		JP	EXAJ	
17247	21400	00001	EZ3	SUB	A*1*AZERO	
17250	61000	17254		JP	EZ4	
17251	10000	01750		PUT	10000*W(DUMP)	
17252	14030	71063				
17253	61000	17256		JP	EXAJ	
17254	10000	23420	EZ4	PUT	100000*W(DUMP)	
17255	14030	71063				
17256	11000	00000	EXAJ	CL	A	
17257	71031	65171		BSK	B0*W(GTHRESH+B1)	
17260	10131	65171		ENT	Q*W(GTHRESH+B1)*SKIP	
17261	10100	00003		ENT	Q*3*SKIP	
17262	23030	71063		DIV	W(DUMP)	

17263	14031	70741		STR	Q*W(THAT+B1)	
17264	72100	17225	EXAK	BJP	B1*EXAL	
17265	65000	15753		PROHISP		START SAMPLING
17266	16030	70410		STR	B0*W(CPHP)	
17267	63340	17267	EXAM	JP	EXAM*MAG00	
17270	65000	17364		RJP	TAPEWAIT	
17271	16030	71021		STR	B0*W(TFLAG)	
17272	74370	17631		OUT	MAGGY*W(IDBUF)	WRITE ID RECORD
17273	13370	17604		EX-COM	MAGGY*W(PNCB)*FORCE	ON UNIT 2
17274	11530	71021	EXAN	ENT	A*W(TFLAG)*ANOT	
17275	61000	17274		JP	EXAN	WAIT FOR INTERRUPT
17276	16030	71021		STR	B0*W(TFLAG)	
17277	12100	00000	EXAGA	ENT	B1*0	
17300	11410	65242		ENT	A*L(MTN)*AZERO	
17301	12100	00002		ENT	B1*2	SET FOR UNIT 3
17302	13371	17605		EX-COM	MAGGY*W(WEOF+B1)*FORCE	WRITE END FILE
17303	11530	71021	EXAO	ENT	A*W(TFLAG)*ANOT	
17304	61000	17303		JP	EXAO	
17305	16030	71021		STR	B0*W(TFLAG)	
17306	65000	16703		RNGTVLTM		CALCULATE RANGE AND TRAVEL TIME
17307	70100	00162		CLEAR1140*NQP		
17310	16030	64370				
17311	70100	00104		CLEAR680*ASUMRNW		
17312	16030	65252				
17313	65000	12536		PHASE2M		
17314	74370	17630		OUT	MAGGY*W(PRODATABF)	WRITE PROCESSED DATA RECORD
17315	13370	17604		EX-COM	MAGGY*W(PNCB)*FORCE	
17316	11530	71021	EXAS	ENT	A*W(TFLAG)*ANOT	
17317	61000	17316		JP	EXAS	
17320	16030	71021		STR	B0*W(TFLAG)	
17321	13370	17606		EX-COM	MAGGY*W(WEOF+1)*FORCE	NEO FILE
17322	11530	71021	EXAT	ENT	A*W(TFLAG)*ANOT	
17323	61000	17322		JP	EXAT	
17324	16030	71021		STR	B0*W(TFLAG)	
17325	65000	16665		RJP	RYTATABLE	
17326	10030	70740		ENT	Q*W(SOA)	SPEED OF ADVANCE IN KNOTS
17327	22000	00024		MUL	200	CHANGE TO YARDS IN 100S
17330	22030	13675		MUL	W(CYCLELENGTH)	TIME BETWEEN SHOTS IN SECONDS
17331	23000	07020		DIV	36000	CONVERT TO HOURS
17332	26030	64350		ADD	Q*W(RANGE)	
17333	14030	64661		STR	Q*W(ID+1)	SET ESTIMATED RANGE IN ID
17334	21700	03410		SUB	A*18000*ANEG	TEST REMAINDER
17335	36030	64661		RPL	Y+1*W(ID+1)	ROUND OFF TO 100 YARDS
17336	65000	13323		TAPESTAT		CHECK TAPE STATUS
17337	36030	71014		RPL	Y+1*W(SERISCNTR)	UPDATE HOURLY SHOT COUNTER
17340	65000	10041		TYPETSCRS		
17341	76007	70000				
17342	10030	64350				
17343	11000	00000				
17344	65000	10306				
17345	10030	71416				
17346	11000	00000				
17347	65000	10306				
17350	10030	65243				
17351	11000	00000				
17352	65000	10306				
17353	11030	70753	EXAWA	ENT	A*W(REPRATE)	
17354	21530	71014		SUB	A*W(SERISCNTR)*ANOT	ARE ALL HOURS SHOTS IN

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17355	61000	17371		JP EXBA	YES
17356	66431	00000	LXAW	SIL-EX SHOTCHAN	
17357	65000	13626		UPITIME	
17360	66430	00000		RIL-EX SHOTCHAN	
17361	11530	70410		ENT A*W(CPHP)*ANOT	
17362	61000	17356		JP EXAW	
17363	61000	17146		JP EXAE	
17364	12000	00000	TAPEWAIT	NO-OP	
17365	12100	00371		ENT B1*249D	DELAY UNTIL
17366	12000	00000	TAPWA	NO-OP	TAPE STOPS
17367	72100	17366		BJP B1*TAPWA	
17370	61010	17364		JP L(TAPEWAIT)	
17371	16030	71021	EXBA	STR B0*W(TFLAG)	
17372	13370	17606		EX-COM MAGGY*W(NEOF+1)*FORCE	
17373	11530	71021	EXBAA	ENT A*W(TFLAG)*ANOT	
17374	61000	17373		JP EXBAA	
17375	65000	13323		TAPESTAT	
17376	16030	71014		STR B0*W(SERISCNTR)	
17377	66431	00000		SIL-EX SHOTCHAN	
17400	65000	13626		UPITIME	
17401	66430	00000		RIL-EX SHOTCHAN	
17402	11030	00160	PEXEC5	ENT A*W(160)	
17403	21030	70737		SUB A*W(CWTIMER)	50 MIN MARK READING
17404	21030	71436		SUB A*614400D	10 MINS OF ICCYS
17405	60700	17402		JP PEXEC5*ANEG	
17406	10000	00002		PUT 2*W(CODEWORD)	
17407	14030	70752			
17410	65000	13015		RJP CW	
17411	10030	00160		PUT W(160)*W(CWTIMER)	
17412	14030	70737			
17413	66431	00000		SIL-EX SHOTCHAN	
17414	65000	13626		RJP UPITIME	
17415	66430	00000		RIL-EX SHOTCHAN	
17416	61200	17421		JP PEXEC145*KEY2	
17417	65000	16421		RJP POUTPUT	
17420	61000	17422		JP PEXEC245	
17421	65000	16332	PEXEC145	RJP PTTY	
17422	65000	10041	PEXEC245	TYPET\$CRSEND OF CW PL100	
17423	76455	64400			
17424	20460	04367			
17425	00604	56251			
17426	20447	70000			
17427	65000	10041		TYPET\$CRSTABLE NOS	
17430	76644	14254			
17431	45005	62063			
17432	00007	70000			
17433	12100	00000		ENT B1*0	
17434	11031	64564	BOY	ENT A*W(NOS+B1)	
17435	21000	00004		SUB A*4	
17436	02000	00003		RSH A*3	
17437	65000	10167		TYPE-DEC \$CR\$A	
17440	77767	77777			
17441	00070	00000			
17442	71100	00011		BSK B1*9D	
17443	61000	17434		JP BOY	
17444	66431	00000		SIL-EX SHOTCHAN	
17445	65000	13626		UPITIME	
17446	66430	00000		RIL-EX SHOTCHAN	

17447	65000	10041		TYPET\$CR\$TIME\$CR\$DAY
17450	76645	15545		
17451	76444	17100		
17452	00000	00077		
17453	65000	10167		TYPE-DEC W(10AY)
17454	00030	70762		
17455	65000	10041		TYPET\$CR\$HOUR
17456	76502	06562		
17457	00007	70000		
17460	65000	10167		TYPE-DEC W(1HOUR)
17461	00030	70761		
17462	65000	10041		TYPET\$CR\$MINUTE
17463	76555	15665		
17464	64450	00000		
17465	00007	70000		
17466	65000	10167		TYPE-DEC W(1MINUTE)
17467	00030	70760		
17470	65000	10041		TYPET\$CR\$SECOND
17471	76634	54320		
17472	56440	00000		
17473	00007	70000		
17474	65000	10167		TYPE-DEC W(1SEC)
17475	00030	70757		
17476	65000	10041		TYPET\$CR\$SET ATTENUATORS FOR NOISE
17477	76634	56400		
17500	41646	44556		
17501	65416	42062		
17502	63004	62062		
17503	00562	05163		
17504	45007	70000		
17505	61300	17507	EXBHB	JP EXBHA*KEY3
17506	61000	17505		JP EXBHB
17507	65000	14755	EXBHA	GNOISE INPUT*MTN
17510	65000	10041		TYPET\$CR\$NOISE SAMPLE TAKEN
17511	76562	05163		
17512	45006	34155		
17513	60544	50064		
17514	41534	55600		
17515	00007	70000		
17516	65000	10041		TYPET\$CR\$SET ATTENUATORS FOR SIGNAL
17517	76634	56400		
17520	41646	44556		
17521	65416	42062		
17522	63004	62062		
17523	00635	14756		
17524	41547	70000		
17525	61300	17543	EXBHC	JP EXBHB*KEY3
17526	11530	70754		ENT A*W(RESET)*ANOT
17527	61000	17525		JP EXBHC
17530	65000	10041		TYPET\$CR\$RESET TAKING ANOTHER NOISE SAMPLE
17531	76624	56345		
17532	64006	44153		
17533	51564	70041		
17534	56206	45045		
17535	62005	62051		
17536	63450	06341		
17537	55605	44500		
17540	00007	70000		

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17541	61000	17507		JP	EXBHA	
17542	61000	17525		JP	EXBHC	
17543	11030	00160	EXBH	ENT	A*W(160)	
17544	21030	70737		SUB	A*W(CWTIMER)	READING AFTER CW
17545	21030	71424		SUB	A*245760D	4 MIN WAIT
17546	60700	17543		JP	EXBH*ANE6	
17547	61000	17115		JP	EXAA	
17550	64335	64335	AOBF	U-TAGGARBAGE*GARBAGE		
17551	00000	00050	BIF	50		
17552	00000	00140	FLIP1	140		
17553	00000	00010	FLIP2	10		DISABLE INPUT TTY
17554	00000	00003	FLIP3	3		ENABLE PRINTER---TTY
17555	00000	53255	MTCO	53255		WRITE ON TAPE UNIT 1
17556	00000	53257		53257		WRITE ON UNIT 3
17557	00000	53256		53256		WRITE ON UNIT 2
17560	00004	00000	MCMT	4 0		REQUEST CONTROL OF MAG TAPES
17561	00000	00400	MAD	400		MASTER CLEAR A/D
17562	00000	00015	MTI	15		CR
17563	00000	00012		12		LF
17564	00000	00111		111		I
17565	00000	00115		115		M
17566	00000	00120		120		P
17567	00000	00040		40		SP
17570	00000	00103		103		C
17571	00000	00117		117		0
17572	00000	00116		116		N
17573	00000	00104		104		D
17574	00001	47255	RW1	147255		REWIND UNIT 1 NO WRITE
17575	00001	47257	RW3	147257		REWIND UNIT 3 NO WRITE
17576	00001	77255	RS1	177255		REQUEST STATUS UNIT 1
17577	00001	77256	RS2	177256		REQUEST STATUS UNIT 2
17600	00001	77257	RS3	177257		REQUEST STATUS UNIT3
17601	00001	77254	RS4	177254		REQUEST STATUS UNIT4
17602	00001	47256	RWCW2	147256		REWIND UNIT 2 NO WRITE
17603	00001	46314	RWCW4	146314		REWIND, DISABLE WRITE ON UNIT 4
17604	00000	53256	PMCB	53256		
17605	00000	73255	WE0F	73255		EOF ON UNIT 1
17606	00000	73256		73256		
17607	00000	73257		73257		
17610	00000	72314		72314		
17611	00000	00243	SOVEL	243		
17612	00000	00001	STEP1	1		
17613	00000	00002	STEP2	2		SANBORN STEPS
17614	00000	00004	STEP3	4		
17615	65000	15244	TELYCALL	RJP GTTY		FOR TELETYPE INTR
17616	65000	13255	MAGCALL	RJP PSTATUS		
17617	65000	16732	SHOTCALL	RJP SHOTOFF		
17620	00013	20000	WAITIME	368640D		
17621	64347	64335	SPLD	U-TAGSHTOTA+9D*GARBAGE		
17622	64335	64335	BAF	U-TAGGARBAGE*GARBAGE		
17623	65244	65244	SPLD1	U-TAGTRST*TRST		
17624	34010	17637	MTBF5	U-TAGLEV+6249D*LEV		
17625	50162	17637	MTBF10	U-TAGLEV+12499D*LEV		
17626	17573	17562	MTIC	U-TAGMTI+9D*MTI		
17627	64334	17637	MTBF15	U-TAGLEV+18749D*LEV		
17630	65214	64350	PRODATBF	U-TAGGID+4*RANGE		
17631	64730	64660	IDBUF	U-TAGID+40D*ID		
17632	70331	65357	PROCDTABUF	U-TAGPROPL5+4*SLAVG		

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17633	70736	70427	RAWOUTBUF	U-TAGRAWOUTAREA+199D*RAWOUTAREA
17634	70426	70416	IDBUFFER	U-TAGCWID+8D*CWID
17635	70411	70411	GARBAGCELL	U-TAGCWINBUF+CWINBUF
17636	70415	70411	CWBUFLIM	U-TAGCWINBUF+4*CWINBUF
			LEV	RESERVE 187500
			GARBAGE	RESERVE 1
			SHTDTA	RESERVE 100
			RANGE	RESERVE 1
			SIG	RESERVE 150
			NOP	RESERVE 1
			ASUMR2	RESERVE 1
			SUMR	RESERVE 1
			INTERCEPT	RESERVE 100
			INTERCEPT2	RESERVE 100
			COEFF	RESERVE 100
			NW2	RESERVE 100
			NW	RESERVE 100
			SIG1	RESERVE 150
			PROPL2	RESERVE 150
			QSUMR2	RESERVE 1
			COEFF2	RESERVE 100
			PROPL	RESERVE 150
			SNTAB	RESERVE 150
			NOS	RESERVE 150
			PEAK	RESERVE 150
			CALIN2	RESERVE 150
			CALIN	EQUALS CALIN2
			CALPK	RESERVE 150
			ID	RESERVE 400
			AGSL	RESERVE 100
			SL178	RESERVE 100
			SLE1	RESERVE 100
			SLE2	RESERVE 100
			SLE3	RESERVE 100
			SLE4	RESERVE 100
			SLE5	RESERVE 100
			NAT	RESERVE 100
			NATT	RESERVE 150
			ATTEN	RESERVE 150
			SGIN	RESERVE 100
			CATT	RESERVE 100
			GSXI	RESERVE 150
			GSXIN	RESERVE 150
			GARBAGE2	RESERVE 1
			GTHRESH	RESERVE 150
			GID	RESERVE 5
			GNATT	RESERVE 150
			TESTY	RESERVE 1
			ETL	RESERVE 1
			SSBC	RESERVE 1
			MFLAG	RESERVE 1
			SSSS	RESERVE 1
			ICMSEC	RESERVE 1
			MTN	RESERVE 1
			SHTQTR	RESERVE 1
			TRST	RESERVE 1
			LTAPE	RESERVE 1
			PAR	RESERVE 1

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SA	RESERVE	1
SO	RESERVE	1
FORCE	RESERVE	1
ASUMRNW	RESERVE	100
QSUMRNW	RESERVE	100
ASUMRNW2	RESERVE	100
QSUMRNW2	RESERVE	100
ARRNW	RESERVE	100
QRRNW	RESERVE	100
QSUBT	RESERVE	1
ASUBT	RESERVE	1
QNOP	RESERVE	1
ANOP	RESERVE	1
ADIVISOR	RESERVE	1
QDIVISOR	RESERVE	1
QSUMR	RESERVE	1
ASUMR	RESERVE	1
CTSNOS	RESERVE	1
SLAVG	RESERVE	7500
AVOES	RESERVE	5
GSXIOB	RESERVE	5
PROPL30	RESERVE	7500
PROPL5	RESERVE	5
INI	RESERVE	1
PLVSRQ5MIN	RESERVE	450
CPHP	RESERVE	1
CWINBUF	RESERVE	5
CWID	RESERVE	90
RAWOUTAREA	RESERVE	2000
CWTIMER	RESERVE	1
SOA	RESERVE	1
THAT	RESERVE	3
MONTH	RESERVE	1
DAY	RESERVE	1
HOURL	RESERVE	1
MIN	RESERVE	1
SEC	RESERVE	1
DEPTH	RESERVE	1
CODEWORD	RESERVE	1
REPRATE	RESERVE	1
RESET	RESERVE	1
LASTIME	RESERVE	1
ICCYS	RESERVE	1
ISEC	RESERVE	1
IMINUTE	RESERVE	1
IHOURL	RESERVE	1
IOAY	RESERVE	1
IMONTH	RESERVE	1
RLM	RESERVE	1
RLMTTY	RESERVE	1
RWT4	RESERVE	1
HOURLNTR	RESERVE	1
CHANGE	RESERVE	1
LASHOTME	RESERVE	1
TESTIME	RESERVE	1
TMP	RESERVE	1
WORDS	RESERVE	1
ITEMS	RESERVE	1

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TEMP	RESERVE	1
STRE	RESERVE	1
TEMP3	RESERVE	1
GEN	RESERVE	1
GTIMER	RESERVE	1
TEMPHOLL	RESERVE	1
FTEMP	RESERVE	1
BHOLD	RESERVE	1
SVB7	RESERVE	1
K	RESERVE	1
R	RESERVE	1
S	RESERVE	1
ALPHA	RESERVE	1
ZETA	RESERVE	1
SERISCNTR	RESERVE	1
THCTR1	RESERVE	3
STATWRD	RESERVE	1
TFLAG	RESERVE	1
TCLOCK	RESERVE	1
INCLOCK	RESERVE	1
CFLAG	RESERVE	1
CFIVE	RESERVE	300
DUMP	RESERVE	1
GHIGH	EQUALS	LEV
TYPECELL1	RESERVE	1
TYPECELL2	RESERVE	1
FORMCELL	RESERVE	1
TPL	RESERVE	500
SNRAT	RESERVE	500
PLAB	RESERVE	240
CYCLEFLAG	RESERVE	1
BANG	RESERVE	900
BANGTIME	RESERVE	1
BAF1	RESERVE	1
TEMP3	RESERVE	1
TEMPT	RESERVE	1
	RETURN	
	END-PROC	EXECP1

71422 61010 17004

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OFFICE OF NAVAL RESEARCH
800 NORTH QUINCY STREET
ARLINGTON, VA 22217-5660

IN REPLY REFER TO
5510/1
Ser 93/160
10 Mar 99

From: Chief of Naval Research
To: Commander, Naval Meteorology and Oceanography Command
1020 Balch Boulevard
Stennis Space Center MS 39529-5005

Subj: DECLASSIFICATION OF PARKA I AND PARKA II REPORTS

Ref: (a) CNMOC ltr 3140 Ser 5/110 of 12 Aug 97

Encl: (1) Listing of Known Classified PARKA Reports

1. In response to reference (a), the Chief of Naval Operations (N874) has reviewed a number of Pacific Acoustic Research Kaneohe-Alaska (PARKA) Experiment documents and has determined that all PARKA I and PARKA II reports may be declassified and marked as follows:

Classification changed to UNCLASSIFIED by authority of Chief of Naval Research letter Ser 93/160, 10 Mar 99.

DISTRIBUTION STATEMENT A: Approved for public release. Distribution is unlimited.

2. Enclosure (1) is a listing of known classified PARKA reports. The marking on those documents should be changed as noted in paragraph 1 above. When other PARKA I and PARKA II reports are identified, their markings should be changed and a copy of the title page and a notation of how many pages the document contained should be provided to Chief of Naval Research (ONR 93), 800 N. Quincy Street, Arlington, VA 22217-5660. This will enable me to maintain a master list of downgraded PARKA reports.
3. Questions may be directed to the undersigned on (703) 696-4619, DSN 426-4619.

PEGGY LAMBERT
By direction

Copy to:
NUWC Newport Technical Library (Code 5441)
NRL Washington (Mary Templeman, Code 5227)
NRL SSC (Roger Swanton, Code 7031)
✓DTIC (Bill Bush, DTIC-OCQ)

PARKA II Acoustic Results, 16 December 1969, USL-PUB-6001, NUSC New London, 106 pages
(NUSC NL Accession # 006001)

PARKA II Interim Report, 18 December 1969, Contract N00014-69-C-0088, Bell Telephone Labs,
129 pages
(NRL SSC Accession # 85007061)

PARKA II-B ONR Scientific Plan 1-70, 15 January 1970, MC Report 04, Maury Center for Ocean
Science (ONR), Unknown # of pages
(NUSC NL Accession # 051663)

Environmental Oceanographic Observations in Support of PARKA II-A Operation, 30 April 1970,
HU-HIG-ITR-4, Hawaii Institute-Hawaii Institute of Geophysics, Unknown # of pages
(NUSC NL Accession # 058081)

PARKA II-A Bottom Loss Measurement, 29 June 1970, USL-R-2408, NUSC New London, 19 pages
(NUSC NL Accession # 002408) (DTIC # C008 441)

PARKA II-A Bottom Loss Measurement, 29 June 1970, USL-2211-023-70, NUSC New London,
Unknown # of pages
(NUSC NL Accession # 185457)

PARKA II-A Experiment, Final Report - Final Draft, Volume 1, The Acoustic Propagation
Measurements, 30 June 1970, Contract N00014-69-C-0088, Bell Telephone Labs, 81 pages
(NRL SSC Accession # 10013937)

PARKA I: Software Procedures Report, 1 July 1970, NUSC/NL Technical Memorandum No. 2211-
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